#### UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON AT SEATTLE

STATE OF WASHINGTON, et al.,

Plaintiffs,

v.

UNITED STATES DEPARTMENT OF STATE, et al.,

Defendants.

NO. C18-1115RSL

DECLARATION OF GERALD COYNE IN SUPPORT OF PLAINTIFFS' MOTION FOR PRELIMINARY INJUNCTION

- 1. I am the Deputy Attorney General of the State of Rhode Island and I have served in this position since 1999. As Deputy Attorney General, I serve as the Chief Deputy to the Rhode Island Attorney General. I report directly to the Rhode Island Attorney General on all matters involving the Office of the Rhode Island Attorney General, including but not limited to matters occurring within our Criminal Division and our Civil Division.
- 2. Among the duties of the Office of Attorney General is to "draw and present all informations and indictments, or other legal or equitable process, against any offenders, as by law required, and diligently, by a due course of law or equity, prosecute them to final judgment and execution." See R.I. Gen. Laws § 42-9-4 (a).
- 3. Within the Office of the Attorney General is the Bureau of Criminal Investigation ("BCI"). Pursuant to statute, the Bureau is charged with initiating criminal investigations for violations of law at the direction of the Attorney General and coordinating efforts in investigating criminal activity with existing federal, state, and local law enforcement officials. See R.I. Gen. Laws § 42-9-8.1(2).
- 4. Rhode Island uses a variety of approaches to enforce its statutory codes and ensure the safety and physical well-being of its residents with respect to firearms, including but not limited to using metal detectors at government facilities and T.F. Green Airport. The production of functional weapons made out of materials other than metal, such as those made by a 3-D printer, will be unrecognizable by standard metal detectors, thereby obfuscating Rhode Island's efforts to protect the safety of its residents at government facilities and T.F. Green Airport.
- 5. Rhode Island further enforces its statutory codes by issuing licenses or permits to persons to carry firearms (whether concealed or not concealed). For example, Rhode Island law

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- provides that the Attorney General "may issue a license or permit to any person twenty-one (21) years of age or over to carry a pistol or revolver, whether concealed or not, upon his or her person upon a proper showing of need[.]" See R.I. Gen. Laws § 11-47-18(a).
- 6. Rhode Island General Laws § 11-47-5(a) also provides that "[n]o person shall purchase, own, carry, transport, or have in his or her possession any firearm," if that person has been convicted of a "crime of violence," "is a fugitive from justice," has been convicted or pled nolo contendere to an offense punishable as a felony, or has been convicted or pled nolo contendere to certain other enumerated offenses. See R.I. Gen. Laws § 11-47-5(a)(4)(i)-(iv). If the Government's "temporary modification" is left in place, Rhode Island will suffer extreme and irreparable harm, as persons ineligible to possess firearms under Rhode Island General Laws § 11-47-18(a), § 11-47-11(a), and § 11-47-5(a)(4)(i)-(iv) will easily be able to obtain downloadable and untraceable guns that can be made at home using a 3-D printer.
- 7. The Attorney General of Rhode Island is additionally vested with the discretionary authority to "issue to any person, firm, or corporation, engaged in manufacturing in this state, a license or permit to manufacture and sell machine guns and any or all machine gun parts[.]" See R.I. Gen. Laws § 11-47-19. The Attorney General's authority as it relates to a licensing and permitting scheme pertaining to the manufacture of weapons will be circumvented and effectively nullified if persons may use CAD files to produce firearms on 3-D printers.
- 8. Rhode Island recently enacted a so-called "red flag" law, which provides a procedure where a petition may be filed in a court of law "requesting an extreme risk protection order that shall enjoin the respondent from having in their possession, custody or control any firearms and shall further enjoin the respondent from purchasing, receiving or attempting to purchase or receive any firearms while the order is in effect." See R.I. Gen. Laws § 8-8.3-3(b). Rhode Island's "red flag" law will be severely undermined, and easily circumvented, if such subjected individuals are able to produce functional weapons on a 3-D printer. Consequently, Rhode Island's strong interest in protecting public safety will be severely harmed and undermined if the "temporary modification" of the USML Category 1 is allowed.
- 9. The Government's "temporary modification" of the USML Category 1 to allow "any United States person" to "access, discuss, use, reproduce, or otherwise benefit from" CAD files for the automated production of 3-D printed weapons hinders and contravenes the above Rhode Island laws regarding firearm regulation, among others. Persons currently prohibited from possessing firearms will be able to circumvent Rhode Island law by manufacturing such a weapon on a 3D printer. These weapons will be untraceable,

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undetectable by typical metal detectors, and avoid all licensing and permitting statutory requirements.

DATED this 6 day of August, 2018 at Providence, Rhode Island.

Gerald Coyne

Deputy Attorney General

Office of the Rhode Island Attorney

General

STATE OF RHODE ISLAND COUNTY OF PROVIDENCE

Subscribed and sworn to before me on this \_\_\_\_\_\_ day of, 2018.

Leresa a Leburneau
Notary Public # 37888
My Commission Expires: 8/22/19

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2 3 4 5 6 UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON AT SEATTLE  8 9 10 STATE OF WASHINGTON; STATE OF CONNECTICUT; STATE OF MARYLAND; STATE OF NEW JERSEY; STATE OF NEW YORK; STATE OF OREGON; COMMONWEALTH OF DECLARATION OF BLAKE GRAHAM,			
UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON AT SEATTLE  STATE OF WASHINGTON; STATE OF CONNECTICUT; STATE OF MARYLAND; STATE OF NEW JERSEY; STATE OF NEW YORK: STATE OF OREGON; COMMONWEALTH OF MASSACHUSETTS; COMMONWEALTH OF PENNSYLVANIA; DISTRICT OF COLUMBIA; STATE OF CALIFORNIA; STATE OF COLORADO; STATE OF HEAWARE; STATE OF HAWAII; STATE OF ILLINOIS; STATE OF NORTH CAROLINA; STATE OF NORTH CAROLINA; STATE OF HODE ISLAND; STATE OF VERMONT and STATE OF VIRGINIA,  Plaintiffs,  V.  UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEPENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	1		The Honorable Robert S. Lasnik
UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON AT SEATTLE  STATE OF WASHINGTON; STATE OF CONNECTICUT; STATE OF MARYLAND; STATE OF NEW JERSEY; STATE OF NEW YORK; STATE OF OREGON; COMMONWEALTH OF MASSACHUSETTS: COMMONWEALTH OF PENNSYLVANIA; DISTRICT OF COLUMBIA; STATE OF CALIFORNIA; STATE OF COLORADO; STATE OF MINNESOTA; STATE OF HAWAII; STATE OF ILLINOIS; STATE OF HAWAII; STATE OF ILLINOIS; STATE OF NORTH CAROLINA; STATE OF RHODE ISLAND; STATE OF VIRGINIA,  Plaintiffs,  V.  UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON, Defendants.	2		
UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON AT SEATTLE  STATE OF WASHINGTON; STATE OF CONNECTICUT; STATE OF MARYLAND; STATE OF NEW JERSEY; STATE OF NEW YORK: STATE OF OREGON; COMMONWEALTH OF MASSACHUSETTS; COMMONWEALTH OF PENNSYLVANIA; DISTRICT OF COLUMBIA; STATE OF CALIFORNIA; STATE OF COLORADO; STATE OF JUSTICE, BUREAU OF FIREARMS  DECLARATION OF BLAKE GRAHAM, SPECIAL AGENT SUPERVISOR FOR TE CALIFORNIA DEPARTMENT OF JUSTICE, BUREAU OF FIREARMS  PLANTAGE OF HOMEN; STATE OF VERMONT and STATE OF VIRGINIA,  Plaintiffs,  V.  UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	3		
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STATE OF WASHINGTON; STATE OF CONNECTICUT; STATE OF MARYLAND; STATE OF NEW JERSEY; STATE OF NEW YORK; STATE OF OREGON; COMMONWEALTH OF MASSACHUSETTS; COMMONWEALTH OF PENNSYLVANIA; DISTRICT OF COLUMBIA; STATE OF CALLFORNIA; STATE OF COLORADO; STATE OF DELAWARE; STATE OF HOWA; STATE OF MINNESOTA; STATE OF IOWA; STATE OF STATE OF VERMONT and STATE OF VIRGINIA,  Plaintiffs,  V.  UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; Policy, DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	6		
STATE OF WASHINGTON; STATE OF CONNECTICUT; STATE OF MARYLAND; STATE OF NEW JERSEY; STATE OF NEW YORK; STATE OF OREGON; COMMONWEALTH OF MASSACHUSETTS; COMMONWEALTH OF PENNSYLVANIA; DISTRICT OF COLUMBIA; STATE OF CALIFORNIA; STATE OF COLORADO; STATE OF BLAWARE; STATE OF HAWAII; STATE OF ILLINOIS; STATE OF HAWAII; STATE OF ILLINOIS; STATE OF NORTH CAROLINA; STATE OF RHODE ISLAND; STATE OF VERMONT and STATE OF VIRGINIA,  Plaintiffs,  V.  UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	7		
STATE OF WASHINGTON; STATE OF CONNECTICUT; STATE OF MARYLAND; STATE OF NEW JERSEY; STATE OF NEW YORK; STATE OF OREGON; COMMONWEALTH OF MASSACHUSETTS; COMMONWEALTH OF PENNSYLVANIA; DISTRICT OF COLUMBIA; STATE OF CALIFORNIA; STATE OF COLORADO, STATE OF DELAWARE; STATE OF HAWAII; STATE OF ILLINOIS; STATE OF HOWA; STATE OF MINNESOTA; STATE OF NORTH CAROLINA; STATE OF NORTH CAROLINA; STATE OF RHODE ISLAND; STATE OF VERMONT and STATE OF VIRGINIA,  Plaintiffs,  V.  UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	8		
CONNECTICUT; STATE OF MARYLAND; STATE OF NEW JERSEY; STATE OF NEW YORK; STATE OF OREGON; COMMONWEALTH OF MASSACHUSETTS; COMMONWEALTH OF PENNSYLVANIA; DISTRICT OF COLUMBIA; STATE OF CALIFORNIA; STATE OF COLORADO; STATE OF DELAWARE; STATE OF HAWAII; STATE OF ILLINOIS; STATE OF IOWA; STATE OF ILLINOIS; STATE OF NORTH CAROLINA; STATE OF RHODE ISLAND; STATE OF VERMONT and STATE OF VIRGINIA,  Plaintiffs,  V.  UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	9	STATE OF WASHINGTON; STATE OF	NO. 2:18-cv-01115-RSL
COMMONWEALTH OF MASSACHUSETTS; COMMONWEALTH OF PENNSYLVANIA; DISTRICT OF COLUMBIA; STATE OF CALIFORNIA; STATE OF COLORADO; STATE OF DELAWARE; STATE OF HAWAII; STATE OF ILLINOIS; STATE OF NORTH CAROLINA; STATE OF NORTH CAROLINA; STATE OF RHODE ISLAND; STATE OF VERMONT and STATE OF VIRGINIA,  Plaintiffs,  V.  UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEPENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; Policy; Office of Defense Trade Controls Policy; Office of Defense Trade Controls Policy; Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	10	CONNECTICUT; STATE OF MARYLAND;	
OF PENNSYLVANIA; DISTRICT OF COLUMBIA; STATE OF CALIFORNIA; STATE OF COLORADO; STATE OF DELAWARE; STATE OF HAWAII; STATE OF ILLINOIS; STATE OF HAWAII; STATE OF ILLINOIS; STATE OF NORTH CAROLINA; STATE OF RHODE ISLAND; STATE OF VERMONT and STATE OF VIRGINIA,  Plaintiffs,  V.  UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	11	COMMONWEALTH OF	
STATE OF COLORADO; STATE OF DELAWARE; STATE OF HAWAII; STATE OF ILLINOIS; STATE OF HOWA; STATE OF MINNESOTA; STATE OF NORTH CAROLINA; STATE OF RHODE ISLAND; STATE OF VERMONT and STATE OF VIRGINIA,  Plaintiffs,  UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy: DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	12		SPECIAL AGENT SUPERVISOR FOR THE CALIFORNIA DEPARTMENT OF
OF ILLINOIS; STATE OF IOWA; STATE OF MINNESOTA; STATE OF NORTH CAROLINA; STATE OF RHODE ISLAND; STATE OF VERMONT and STATE OF VIRGINIA,  Plaintiffs,  UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	13		JUSTICE, BUREAU OF FIREARMS
CAROLINA; STATE OF RHODE ISLAND; STATE OF VERMONT and STATE OF VIRGINIA,  Plaintiffs,  Plaintiffs,  UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	14	OF ILLINOIS; STATE OF IOWA; STATE OF	
VIRGINIA,  Plaintiffs,  V.  UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	15	CAROLINA; STATE OF RHODE ISLAND;	
Plaintiffs,  V.  UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	16		
UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.		Plaintiffs,	
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STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	19	v.	
DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	20	STATE; MICHAEL R. POMPEO, in his	
capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	21		
HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	22	capacity as Acting Deputy Assistant Secretary	
Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,  Defendants.	23	HEIDEMA, in her official capacity as Director	
CONN WILLIAMSON,  Defendants.		Policy; DEFENSE DISTRIBUTED; SECOND	
Defendants.	25		
27		Defendants.	
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Decl. of Blake Graham ISO Pls.' Mot. for Prelim. Inj. (18-cv-011		Decl. of Blal	ke Graham ISO Pls.' Mot. for Prelim. Inj. (18-cv-01115)

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#### DECLARATION OF BLAKE GRAHAM

#### I, BLAKE GRAHAM, declare:

1. I am a Special Agent Supervisor for the California Department of Justice, Bureau of Firearms. I make this declaration of my own personal knowledge and experience and, if called as a witness, I could and would testify competently to the truth of the matters set forth herein.

#### BACKGROUND AND QUALIFICATIONS

- 2. I received a Bachelor of Science degree in May 1992, in Criminal Justice from the California State University, Sacramento. My coursework included forensics, corrections, and a number of classes in criminal-justice related topics.
- 3. Since 1994, I have worked as either an Investigator for the California Department of Alcoholic Beverage Control (ABC), or as a Special Agent for the California Department of Justice (DOJ). My job responsibilities in all of these positions have at least partially required the recovery, investigation, and identification of firearms.
- 4. My work as an Investigator for ABC between 1994 and 1999 included the recovery of firearms and ammunition, which would be catalogued and booked into evidence.
- 5. Between 1999 and 2002, I worked as a Special Agent for DOJ, and was assigned to the Violence Suppression Program in the Bureau of Narcotic Enforcement. In this job, I investigated violent crimes and various violations occurring at California gun shows. As a gun show agent, I attended gun shows in the San Francisco Bay Area to monitor—and if necessary, seize—firearms, ammunition, and magazines sold illegally to felons, parolees, and probationers.
- 6. From October 2002 to the present, I have been a Special Agent and Special Agent Supervisor, for the DOJ's Bureau of Firearms (BOF). In this capacity, I am assigned to recover firearms from prohibited individuals, monitor gun shows for illegal activities, conduct surveillance on gun dealers suspected of illegal activity, and investigate illegal trafficking of firearms, manufacturing of assault weapons, machine guns, and illegal possession of ammunition.
- 7. Since 2008, I have been responsible for reviewing handguns that are submitted by manufacturers for inclusion on California's roster of handguns certified for sale.

Through this process, I have become familiar with the components and calibers of numerous handguns currently and previously on the roster. As of August 7, 2018, there were 815 handguns on the roster. A copy of the roster, which can change daily, can be found on the DOJ website: <a href="https://oag.ca.gov/firearms/certguns?make=All">https://oag.ca.gov/firearms/certguns?make=All</a>.

- 8. In my career, I have attended at least 40 gun shows and visited over one hundred gun stores and have become knowledgeable on current laws pertaining to the sales and licensed manufacture of firearms, and unlicensed manufacture of unserialized firearms (sometimes called "ghost guns") in the State of California.
- 9. I have been trained and qualified to carry several different types of firearms, including: Glock Model 17 (9 mm semi-automatic pistol), multiple Glock .40 caliber semi-automatic pistols, Heckler & Koch MP5 (9 mm submachine gun), Smith & Wesson, Model 60 (.38 Special revolver), multiple .45 caliber semi-automatic pistols, and a Colt, Model M4 (5.56 mm machine gun). I have access to other Department-owned handguns, shotguns, submachine guns, machine guns, rifles, shotguns and 40 mm "less lethal" launchers.
- 10. Throughout my career, I have conducted training programs in the identification and handling of firearms. I have trained other Special Agents in BOF on assault weapons and firearms identification. I also have given firearms identification classes to members of California District Attorney's offices and Law Enforcement Agencies.
- 11. I have also completed at least 15 firearms training courses since 1994. These courses included the assembly and use of specific firearms, cartridge composition (bullet, the propellant, and the casing), common calibers used by law enforcement, and training on rifle and handgun ammunition. I have been certified as a California Peace Officer Standards and Training approved Firearms Instructor/Range Master since 2002.
- 12. During the course of my career, I have become proficient in the use and disassembly of various revolvers, pistols, submachine guns, shotguns, and rifles. I have made or assisted in the arrest of at least 30 persons for violations involving illegal weapons possession. In the course of my employment I have participated in excess of 30 search warrants that involved the illegal possession of firearms.

13. I have been qualified as an expert witness regarding the use of firearms in 15 cases in both federal and state court since 2007.

#### **GHOST GUNS**

- 14. Under California Law, a firearm is "a device, designed to be used as a weapon, from which is expelled through a barrel, a projectile by the force of an explosion or other form of combustion." Cal. Penal Code § 16520(a). For rifles and shotguns (long guns), the basic unit that most other parts attach to is called a receiver. Long guns can have single-part receivers (most common) or multipart receivers (the AR-15 series and its derivatives), depending on the type of firearm. For handguns, the basic unit is called a frame. Frames are single-part or multipart designs (the AR-15 handgun series, for example). A receiver or frame is "the" firearm for purposes of ownership, possession, and background checks.
- 15. Once an unfinished receiver or frame has been machined or manufactured beyond a certain point, it will be deemed a firearm under Federal law. The Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) has ruled from time to time that a device either was or was not yet a firearm. In general, firearms industry slang terms such as "80% receiver," "80% blanks," "80% frames," and "80% lowers" have developed and are now in common use among firearms enthusiasts and the media. The idea behind the "80%" slang is that, while the vast majority of the work on the receiver or frame was complete, the device is not yet a firearm. Regarding the AR-15 series of firearms, some crucial areas must be left unfinished, or the device might be deemed a firearm. The areas on an unfinished frame or receiver that need to remain un-machined to retain non-firearm status are the fire control pocket, the trigger hole, the trigger pin hold, the hammer pin hole, and the selector-lever hole.
- 16. Over the past five years, the term "ghost gun" has been also used to identify firearms without serial numbers or other identifying marks that are manufactured by non-licensed persons. For purposes of this declaration, a licensed person is someone licensed to manufacture firearms by ATF or the State of California.

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17. After the mass shooting in Sandy Hook, Connecticut, in 2012, I noticed a spike in non-licensed firearms manufacturing. Based on my experience as a law enforcement officer attending gun shows, visiting gun stores, and reading firearms websites, it seemed that there was a general fear among a certain segment of firearms owners in California that the State or Federal government might pass restrictive firearms laws because of the shooting.

18. In general, until about a year ago, roughly 90% of the ghost-gun market, in my estimation, was for AR-15 and AK-47 based models. Based on my experience, some handguns and other long guns were being made, but the vast majority of ghost guns were either AR-15 or AK-47 based designs and builds. In the past year or so, kits allowing a purchaser to build semi-automatic handgun designs have become widely available. These kits are mainly polymer type plastic frames with Glock internal parts and Glock-like slides. (Glock is a Federal Firearms Licensee that makes handguns in Austria and the United States. These semi-automatic handguns are relatively inexpensive, reliable, and very popular.) Video tutorials on how to build these self-built handguns are widely available on the Internet. If a person uses a kit to manufacture a semi-automatic handgun, they risk criminal liability under California's Unsafe Handgun Act, unless they are manufacturing the gun for testing and approval under the Act. Among other things, the Act requires that pistols include certain features, such as chamber-load indicators, magazine disconnects, and microstamping technology. Cal. Penal Code § 31910(b). (Pistols that have been grandfathered in under the Act or that satisfy certain other requirements do not have to include these features.)

#### **GHOST GUNS IN CALIFORNIA**

19. The Firearms Industry often outpaces state and federal laws. Firearms accessories are constantly being developed that might be legal in one state and not legal in California. California has numerous unique firearms laws. Not only has there been increased interest in manufacturing ghost guns in recent years, but developments, including the use of types of plastics to manufacture frames and receivers, have made ghost guns more accessible. Ghost-gun-related crime is a significant source of concern in the law-enforcement community in California, and I have come to the conclusion that ghost guns, including 3D printed guns, are a significant public

safety concern. I base this conclusion on my own investigative and law-enforcement duties and experience, as well as information available to me in my capacity as a Special Agent Supervisor for BOF.

#### I. Personal Involvement in Ghost Gun Investigations

- 20. To my knowledge, the first California Department of Justice investigation that involved the unlicensed manufacturing of un-serialized firearms occurred sometime in 2004 to 2005. From that point until 2013, the number of investigations involving unlicensed and un-serialized firearms manufacturing that the Department was involved in grew slowly. Then, beginning in early 2013, I became aware of relatively large numbers of individuals in California building firearms from unfinished firearm receivers or unfinished firearm frames.
- 21. In March 2013, I served as part of a joint task force between the BOF and ATF, investigating Luis Cortez-Garcia and Emiliano Cortez-Garcia for selling manufactured-to-order firearms that did not have manufacturer markings or serial numbers, making them untraceable. They and their co-conspirators would sell customers, who paid in cash, all the working parts of a firearm and an incomplete lower receiver. They would have the customer visit Emiliano Cortez-Garcia, who would have the customer initially drill a few holes into the fire control pocket and then Emiliano himself would complete the machining process of making the unfinished receiver into a finished lower receiver. Emiliano and Luis—both of whom were prohibited from possessing firearms—would assemble the parts into completed AR-15-style ghost guns. As a result of this investigation, law-enforcement agents seized almost 350 guns from ten locations in the 200-mile span from Fresno to Auburn, California. Emiliano and Luis were indicted, convicted, and sentenced for multiple firearms violations.
- 22. During the Cortez-Garcia investigation, we learned of another location making ghost guns in a machine shop equipped with computer numeric control (CNC) machines. The owner of this machine shop was Daniel Crowninshield, who had given himself the nickname "Dr. Death" on a firearms enthusiast website and who was prohibited by state and federal law from owning, possessing, or manufacturing firearms. As a result of this investigation, Crowninshield was later indicted by a federal grand jury and ultimately convicted and sentenced to prison.

23. Since the investigations into the Cortez-Garcia brothers and Crowninshield, I have participated in or consulted on several investigations involving ghost guns not described in this declaration.

#### II. An Overview of Several Significant Ghost Gun Investigations in California

- 24. As part of my duties, I collect information about ghost-gun related crime in the State and across the United States. This information comes primarily from news reports and press releases from various law-enforcement agencies, but also from my contacts in the law-enforcement community. In addition, BOF's current record keeping generates some information about the use of ghost guns in crime.
- 25. While my research is ongoing, I have assembled a chronology of significant ghost-gun crimes in the State:
  - a. <u>June 2013.</u> John Zawahri, of Santa Monica, California, killed five people and wounded three others using a ghost gun—a homemade AR-15-style assault rifle. Several months earlier, BOF had stopped him from purchasing a firearm when a background check showed that he was a prohibited person because of a commitment in a mental-health institution.
  - b. **February 2014.** A federal grand jury indicted brothers Luis Cortez-Garcia and Emiliano Cortez-Garcia, who operated an unlicensed firearms business in Sacramento, on charges of unlawful manufacturing and sales of firearms (arising from the investigation that I participated in, discussed in ¶ 21, above). They were later convicted and sentenced for these crimes.
  - c. March 2014. Federal agents from ATF served a search warrant on an unlicensed firearms-accessory store in San Diego County and recovered about 6,000 unserialized polymer AR-15 lower receivers that had been fabricated to eliminate the need for precise machining to make them functional. The search also uncovered information showing that more than 5,000 customers had purchased these receivers with no background checks associated to the sales of these receivers.

- d. <u>June 2014.</u> Daniel Crowninshield, of Sacramento, California, was indicted for various firearms crimes, including operating a scheme designed to sell ghost guns by having customers participate in a trivial step in the manufacturing process (arising from the investigation that I participated in, discussed in ¶ 22, above).
- e. <u>July 2014.</u> Three Norteño gang members used an AK-47-style ghost gun and several handguns in an attempted bank robbery in Stockton, California. They kidnapped three patrons and led law enforcement on an hour-long chase, firing hundreds of shots. Two of the gang members and one of the hostages died during the shootout.
- f. May 2015. Clay Bautista-Marquez pleaded guilty to firearms trafficking. He and three other men were making and selling illegal ghost guns from un-serialized AR-15 style lower receivers. More than 50 firearms were seized during the investigation. Some of the ghost guns were short-barrel rifles and assault weapons.
- g. <u>July 2015.</u> Scott Bertics murdered his former girlfriend and then killed himself in Walnut Creek, California, using a ghost gun.
- h. October 2015. Federal officials indicted eight men in Northern California for running an illegal gun-selling ring. Many of the firearms seized were un-serialized ghost-gun, short-barrel rifles and un-serialized ghost-gun assault weapons.
- January 2016. Craig Mason of Grass Valley, CA was indicted for unlawful dealing of firearms and unlawful manufacture of firearms. Mason helped manufacture two AR-15-style ghost guns for a confidential informant who told Mason he was a felon.
- j. <u>February 2016.</u> A Federal Firearms Licensee, Christopher Cook of Bakersfield, California, forfeited 3,800 polymer lower receivers for AR-15-style guns. He had illegally manufactured those firearms with no serial numbers and sold 33 of them to ATF agents without conducting a background check or completing legally

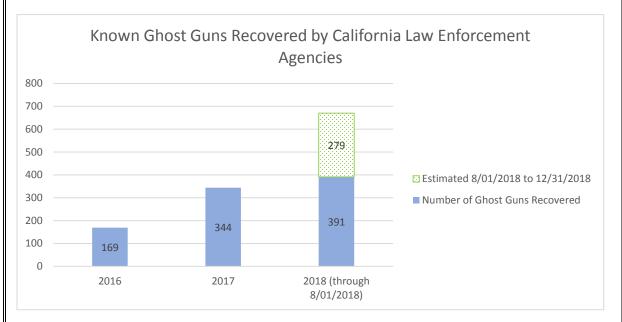
- required paperwork. It is unknown how many of these ghost guns were sold to members of the public before the ATF investigation closed this operation down.
- k. <u>November 2016.</u> ATF agents and LAPD officers purchased seven ghost guns in an investigation that ultimately led to 17 gang members, felons, and their associates being arrested on firearms and narcotics charges.
- March 2017. James Smallwood and John Smallwood of Sacramento, California, were indicted for illegal firearms sales, including 17 AR-15-style ghost guns. At the time of his arrest, James Smallwood was arrested en-route to sell 14 more ghost guns.
- m. <u>March 2017.</u> Scott Coyle of Redlands, California, was arrested by ATF and local police for dealing firearms without a license. He sold five ghost gun rifles to an informant that openly claimed he was a felon and that he intended to take the guns to Mexico.
- n. <u>May 2017.</u> Paul Holdy, of La Jolla, California, was indicted for federal gun and narcotics crimes, including selling ghost guns.
- o. November 2017. Kevin Neal of Rancho Tehama, California, used a ghost gun to kill his wife and four other people, and wound ten more. He was shot and killed in a stand-off with local law-enforcement officers. Neal had been served with a restraining order and had no known firearms in the California Department of Justice Automated Firearms System. At the time of the spree, he was on bail pending trial for crimes including two felonies.
- p. <u>February 2018.</u> A federal court sentenced David Guevara-Pimentel for firearms crimes, including selling ghost guns in 2014 and 2015.
- q. March 2018. Axel Galvez was sentenced for federal firearms violations. Galvez manufactured ghost guns at a South Los Angeles machine shop where he worked. He sold five assault rifles to an undercover agent, whom Galvez believed was a convicted felon. In discussions with the undercover agent, Galvez negotiated the sale of another 100 homemade assault rifles, offering a bulk discount.

- r. <u>June 2018.</u> BOF Agents, working with ATF agents and local police, seized ghost guns and ghost-gun components from the residence of a convicted felon.
- s. <u>June 2018.</u> Joe Darwish ambushed two San Diego police officers using a ghost-gun AR-15-style rifle and two polymer-based ghost-gun pistols. Darwish wounded both officers, who survived. He was killed in the confrontation. At the time, Darwish, who had a history of violence, criminal convictions, and mental-health problems, was prohibited from possessing a firearm.
- t. <u>July 2018.</u> ATF agents and LAPD officers seized more than 45 ghost guns from a Los Angeles-based gang and arrested several of its members. The gang was manufacturing and selling ghost-gun pistols and AR-15-style assault rifles. At a press conference following the arrests and seizure, ATF Special Agent in Charge Bill McMullan said "[s]earch warrants at the end of the investigation resulted in the seizing of firearms manufacturing tools and materials used to build AR-style rifles and pistols from unfinished lower receiver kits. This is a common trend ATF is seeing in SoCal amongst gangs. Criminals building their own guns since they are prohibited from buying guns legally."
- 26. In addition to keeping track of reports of ghost gun crimes in California, I have access to data showing local law-enforcement encounters with ghost guns. Under California law, local law-enforcement agencies are required to submit descriptions of "serialized property" to the California Department of Justice. Cal. Penal Code § 11108(a). In the case of firearms, that information is submitted into a database called the Automated Firearms System (AFS). *See id.* § 11108(b). California law gives local law-enforcement agencies the discretion to report "all available information necessary to identify and trace the history of all recovered firearms that are illegally possessed, have been used in a crime, or are suspected of having been used in a crime." *Id.* § 11108.3(a). BOF oversees the AFS and provides guidance and assistance to local law-enforcement agencies on submitting information into the system.
- 27. As noted above, ghost guns do not have serial numbers. Many local law-enforcement agencies, however, attempt to report un-serialized firearms. (These firearms may include, for

example, guns manufactured before 1968, when federal law started requiring that new firearms bear serial numbers.) In 2015, BOF started to receive enough reports of ghost guns, and inquiries on how to report them, that it developed a way to code them in AFS. As a result, the AFS provides a source of data on ghost guns recovered by local law-enforcement agencies in California. This data is not complete and does not represent a comprehensive source for all ghost guns encountered by law enforcement in the State. It also does not include ghost guns recovered by federal agencies. It does not include pre-1968 firearms manufactured by Federal Firearms Licensees such as un-serialized long guns, since they were not manufactured by unlicensed subjects. And not all local law-enforcement agencies may choose to report a ghost gun into the AFS.

28. As part of my preparation of this declaration, I have reviewed the AFS for available data on ghost guns, which are coded in the system by BOF with serial numbers beginning with "FMBUS," or firearm manufactured by unlicensed subject. A series of numbers will follow each FMBUS type serial number. These FMBUS identifiers do not repeat and are unique to one weapon. The first entry occurs on December 9, 2015, when BOF started using the code. From that date to the end of 2015, the system lists 26 guns. The system lists 169 guns for 2016, 344 guns for 2017, and 391 guns for 2018 through August 1, 2018. Assuming the remaining five months of 2018 result in as many ghost-gun entries as the first seven months of the year, I

anticipate approximately 670 entries by December 31. These numbers—excluding the few weeks in 2015 for which data exists—are reproduced in the following chart:



- 29. As noted above, this data does not include ghost guns seized by federal authorities, and several local law-enforcement agencies may not be reporting, or may not have reported, the seizure of ghost guns in the years listed above. These limitations mean that it is theoretically possible that the increase in reports from 2016 through this year is attributable to a growing awareness among local law-enforcement that they can report ghost guns in the AFS, rather than an increase in the prevalence of ghost guns in California, but I believe that this is unlikely. The more likely explanation for the data, based on my personal knowledge and experience, is that ghost guns are becoming more common. I see this in my own investigations, and I hear it from the federal and local law-enforcement agencies I work with. In fact, I believe these numbers understate the prevalence of ghost-gun crime in California.
- 30. The numbers also correspond to another disturbing trend: an increase in prohibited persons who possess ghost guns. BOF conducts investigations at California gun shows to enforce firearms laws. During recent gun-show investigations in Sacramento and Solano Counties, BOF Special Agents have encountered multiple felons purchasing kits to build ghost guns. BOF Sacramento Special Agents have arrested three subjects to date, and the criminal cases are

ongoing for these individuals. One of the most common problems we see at these gun shows are the ghost-gun kits being sold to anyone with enough money. No background checks are being conducted for the unfinished receivers or frames.

31. BOF also conducts investigations of persons who once lawfully purchased firearms and later became firearms prohibited. The database that contains the personal information of these subjects is called the Armed Prohibited Persons System or APPS. The APPS has been used by BOF since 2006. There are currently more than 9,000 active subjects in the system. BOF Special Agents work each week to recover firearms from the subjects in the database, but each week more are added. Some of the subjects that BOF Special Agents contact looking for serialized firearms also have un-serialized ghost guns as well. Since December of 2015, BOF Agents have seized at least 63 ghost guns from 23 subjects identified by APPS. In 2015, they seized 2 ghost guns; in 2016, they seized 18; in 2017, they seized 1; and to date, in 2018, they have seized 42.

# III. The Widespread Availability of Computer Files that Allow for the Easy Manufacture of Ghost Guns Poses a Threat to California Firearms Laws and Californians

- 32. Ghost guns pose a public-safety issue because they allow people to circumvent California's laws governing the purchase and sale of firearms. The example in paragraph 25.c above helps show the scope of the problem. In that case, a non-licensed store in San Diego sold AR-15 polymer receivers to more than 5,000 customers. That means that potentially more than 5,000 people were able to obtain AR-15-style guns without going through a licensed firearms dealer and without a background check or cooling-off period. Cal. Penal Code § 26815, 27540. If any of those guns are used in a violent crime, it will be exceedingly difficult, if not impossible, to track them back to their source. They also were not entered into the AFS, meaning if law enforcement officers execute a search or arrest warrant on one of those 5,000 or more customers in the future, those officers will not know that they may have an AR-15-style firearm at their disposal.
- 33. As a law-enforcement officer, my most significant concern is with these firearms falling in the hands of prohibited persons who will use them in violent crimes. California has

already witnessed a prohibited person use polymer-based ghost guns to attack police officers (¶ 25.t). It has also witnessed multiple mass shootings by people who could not have purchased the ghost guns they used from a licensed firearms dealer (¶¶ 25.a and 25.o). And I believe the 2014 case of the three Norteño gang members, described above in paragraph 25.e, would have been more deadly if they had three AK-47-style ghost guns instead of just one.

- 34. 3D printed guns have the potential to pose an even greater threat. 3D printing of firearms and later assembly of them can take at least two paths. First, a 3D printer can be used to manufacture multiple plastic pieces of a firearm. Those pieces would then need to be assembled to make a working firearm. (Although federal law requires 3D printed guns to have a 3.7 ounce piece of stainless steel embedded in the frame, this requirement can easily be ignored.) This kind of production would probably have a limited lifespan—given the current state of the technology—due to breakage issues, but it is still a viable threat. A second possible use for 3D printers would be to print out just a frame or receiver of a firearm and then assemble a working weapon from commercially available and uncontrolled firearms parts (using a metal barrel for example).
- 35. 3D printers can make the process for obtaining a ghost gun much simpler. Instead of going through a middleman, like the Cortez-Garcia family (¶¶ 21, 25.b) or Dr. Death (¶¶ 22, 25.d), firearms-prohibited persons and those persons who do not wish the government to be aware of their firearms ownership will have an additional method to make guns on their own. This will make ghost guns harder to keep off the streets, because law enforcement will not be able to monitor them through gun stores and gun shows.
- 36. Concerns about ghost guns prompted the California Legislature to pass Assembly Bill 857 in 2016, which requires persons already in possession of ghost guns to report them to BOF, seek a BOF-issued serial number, apply the number to the firearm and then report back to BOF that the firearm has been serialized. Cal. Penal Code §§ 29180-84. Additionally, the law requires that after July 1, 2018, if a person wants to manufacture a firearm for themselves, they must pass a background check before BOF will issue them a serial number to be applied to their firearm.

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1	37. I do not anticipate that prohibited persons will follow the California ghost-gun
2	serialization law and report existing ghost guns or request a serial number from BOF before
3	building a ghost gun in the future, because it is a crime for a prohibited person to possess or
4	manufacture a firearm.
5	38. I am aware that the federal government entered into a settlement agreement with a
6	company known as Defense Distributed in a case captioned <i>Defense Distributed v. U.S. Dep't of</i>
7	State, No. 15-cv-372 RP (W.D. Tex.). I understand that, in the settlement agreement, the federal
8	government committed to taking steps to change federal laws that prohibited Defense Distributed
9	from posting CAD files online and that those changes will increase the accessibility of 3D guns.
0	Wider availability of 3D printed guns would impair BOF's ability to implement California's
1	firearms safety laws. As a result, prohibited persons and violent criminals will have greater
2	access to firearms, including AR-15 style guns and potentially some guns that cannot be detected
3	by metal detectors, increasing the risk that more Californians will be injured or killed.
	by metal detectors, increasing the risk that more Camornians will be injured of kined.
4	In compliance with 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true
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6	and correct.
7	Executed on: August 8, 2018
8	Executed on: August 6, 2018
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0	BLAKE GRAHAM
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Decl. of Blake Graham ISO Pls.' Mot. for Prelim. Inj. (18-cv-01115)

1		The Honorable Robert S. Lasnik
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7 8	WESTERN DISTRIC	DISTRICT COURT T OF WASHINGTON ATTLE
9	STATE OF WASHINGTON A 1	NO 2 10 01115 PGI
10	STATE OF WASHINGTON, et al.	NO. 2:18-cv-01115-RSL
11	Plaintiffs,	DECLARATION OF JOHN S. CAMPER
12	v.	
13	UNITED STATES DEPARTMENT OF STATE, et al.,	
14	Defendants.	
15	I, John S. Camper, declare as follows:	
16 17	1. I am over the age of 18 and have	e personal knowledge of all the facts stated
	herein.	
18 19	2. I am the Director of the Colorad	o Bureau of Investigation ("CBI"). I have held
20	this position since January 2, 2018. I am the ch	nief administrative officer of the CBI and an
21	agent. I supervise and direct the administration and all other activities of the CBI.	
22	3. For the reasons outlined below, the Temporary Modification of Category I of	
23	the United States Munitions List ("Temporary Modification") will undermine Colorado's	
23 24	efforts to prevent the proliferation of dangerous	s weapons, allow individuals ineligible to

DECLARATION OF JOHN S. CAMPER

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possess firearms under state or federal law to easily obtain them without a background check, and hinder law enforcement's ability to investigate criminal activity involving firearms,.

- 4. Colorado law prohibits several categories of individuals from possessing firearms. In addition to restrictions imposed by federal law, *see* 18 U.S.C. § 922(g) and (n), those under the age of eighteen are generally prohibited from possessing handguns, Colo. Rev. Stat. § 18-12-108.5(1)(a), and certain previous offenders are generally barred from firearm possession altogether. Colo. Rev. Stat. § 18-12-108(1). Individuals subject to civil protection orders may not possess or attempt to purchase or receive a firearm while the protection order is in effect, Colo. Rev. Stat. § 18-6-803.5(1)(c), and must generally surrender any firearms in their possession within 24 hours of being served with a qualifying order. Colo. Rev. Stat. § 18-1-1001(9).
- 5. Pursuant to Colo. Rev. Stat. § 24-33.5-424(2), the CBI serves as the state point of contact for implementation of 18 U.S.C. § 922(t), all federal regulations and applicable guidelines adopted pursuant thereto, and the NICS system. The CBI is responsible for conducting nearly universal background checks related to the transfer of a firearm, including private transfers and transfers at gun shows utilizing ATF Form 4473, which mandates the inclusion of the firearm's serial number.
- 6. The Temporary Modification undermines CBI's ability to ensure Colorado's compliance with these mandates. 3D printed firearms can be printed and possessed by anyone with suitable equipment regardless of eligibility to possess firearms under federal or state law. Because home-printed 3D firearms never enter the stream of commerce through a Federal Firearms Licensee ("FFL"), no background check is ever performed. The CBI thus cannot verify that an individual who has home-printed a firearm is legally entitled to possess it.

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7. Nor is ensuring the eligibility of firearm owners the only problem. Because		
they are made primarily of composites, 3D printed firearms can be used to evade security		
measures such as magnetometers in place throughout public facilities in Colorado, including		
airports, courthouses, music and sporting venues, and governmental offices, thereby		
jeopardizing private citizens and law enforcement		
8. Proliferation of 3D-printed firearms will also hamper law enforcement's ability		
to investigate crimes. For example, the CBI relies upon manufacturing data, including the		
serial number, of firearms used in crime as part of its criminal investigative duties. Because		
3D printed firearms lack this information, the chain of ownership is essentially untraceable.		
9. The CBI performs forensic laboratory analysis for Colorado law enforcement		
agencies, including firearms analysis. § 24-33.5-402(1)(c), C.R.S. Data from recent analyses		
establish that the unique characteristics of 3D printed firearms render many existing forensic		
techniques ineffective.		
10. In 2017, the CBI participated in research on forensic testing of 3D printed		
firearms. CBI analysts, working in concert with a private laboratory, printed five 3D firearms		
from open-source plans similar to those offered by Defense Distributed, and applied standard		
forensic techniques to those firearms after they were fired. The five 3D firearms tested were		
Reprringer .22 Long Rifle caliber derringer		
Grizzly .22 Long Rifle caliber pistol		
Liberator .380 Auto caliber pistol		
Pepperbox Liberator .380 auto revolver		
Washbear .22 Long Rifle caliber revolver		

DECLARATION OF JOHN S. CAMPER

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1	11. Forensic analysts examined the 3D printed firearms and projectiles for DNA
2	and serology, latent fingerprints, GSR (gunshot residue), and firearm characteristics. In its
3	limited sample size, the CBI determined 3D printed firearms and factory manufactured
4	firearms yielded comparable data for latent print and DNA/Serology. GSR from the 3D
5	firearms tested was atypical because it contained the polymer from the composite material used
6	in the 3D printing process creating the firearm.
7	12. Most importantly, the CBI's analysis of 3D printed firearms established that
8	standard forensic techniques cannot be applied to link a particular projectile or bullet to a
9	particular 3D printed firearm. There are at least three reasons for this. First, the barrel of a 3D
10	printed firearm is not rifled and as a consequence does not contain unique lands and grooves
11	that transfer to the projectile when it is fired. Second, even if a 3D printed firearm left unique
12	markings on a projectile, due to the lack of durability of the composites used, the firing
13	conditions cannot be replicated from one shot to the next. Finally, the very instability of the
14	3D printed firearm causes unsafe firing conditions, even in a controlled laboratory setting.
15	13. This instability in construction is not only of concern in a controlled laboratory
16	setting. The guns tested frequently misfired and the force of the gunshot broke some of the
17	firearms apart. These conditions, coupled with the inaccurate trajectory that was common to
18	each of the firearms tested, would cause significant risk to the shooter and bystanders.
19	Dated this <u>8th</u> day of August, 2018.
20	s/ John S. Camper
21	JOHN S. CAMPER
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1	I declare under penalty of perjury under the laws of the State of Washington and the
2	United States of America that the foregoing is true and correct.
3	DATED this 8th day of August, 2018, at <u>Lakewood, Colorado</u> .
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5	s/ John S. Camper
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DECLARATION OF JOHN S. CAMPER

2:18-cv-01115-RSL

1 THE HONORABLE ROBERT S, LASNIK 2 3 4 5 6 7 UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON 8 AT SEATTLE 9 STATE OF WASHINGTON, et al. NO. 2:18-cv-01115-RSL 10 Plaintiffs, DECLARATION OF 11 ROBERT HERZOG IN SUPPORT OF PLAINTIFF'S v. 12 MOTION FOR PRELIMINARY UNITED STATES DEPARTMENT OF INJUNCTION 13 STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official Noting Date: August 10, 2018 15 capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; and SARAH 16 HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls Policy: DEFENSE DISTRIBUTED: SECOND 17 AMENDMENT FOUNDATION, INC.; and CONN WILLIAMSON 18 19 Defendants. 20 I, ROBERT HERZOG, declare as follows: 21 1. I am over the age of 18 and have personal knowledge of all the facts stated herein. 22 2. The Washington State Department of Corrections (DOC or Department) houses 23 approximately 19,500 incarcerated individuals in 12 prisons and 13 work release facilities across 24

DECLARATION OF ROBERT HERZOG IN SUPPORT OF PLAINTIFF'S MOTION FOR PRELIMINARY INJUNCTION 2:18-cv-01115-RSL ATTORNEY GENERAL OF WASHINGTON 800 Fifth Avenue. Suite 2000 Seattle, WA 98104-3188 (206) 464-7744

the state. DOC also supervises over 19,000 individuals in the community pursuant to community custody terms ordered by sentencing courts. I began with the Washington State Department of Corrections in April 1982. In my 36-year career with the Department, I have served in many capacities, including 19 years as uniformed custody staff, where I was tasked with maintaining the safety and security of prisoners, staff, and visitors. I also have served as an Associate Superintendent, Deputy Superintendent, and Superintendent of several DOC facilities, including the Monroe Correctional Complex, one of the state's largest prisons. In 2015, I became a Deputy Director of Prisons, with oversight of half of the state's correctional facilities, along with responsibility for our Intelligence and Investigations Units and all restricted housing operations (secure housing placements for dangerous individuals). In April 2017, DOC Secretary Stephen Sinclair appointed me Assistant Secretary for Prisons, a position I hold today. As Assistant Secretary, I am responsible for the overall leadership, direction, oversight, and safety and security of all Washington prisons. I also serve on the Secretary's Executive Strategy Team, and in that capacity frequently interact with leaders of other divisions within the Department on matters of importance to the operation of the state's correctional system. The Department's mission is to improve public safety. We do this by safely and

- humanely incarcerating individuals sentenced to prison terms by the courts, by providing education and other reentry-focused programming during incarceration, and by providing community supervision and support to high-risk individuals sentenced to community custody following release from confinement. Critical to achieving this mission is maintaining safety and security within the Department's prisons and work release facilities.
- 4. While most incarcerated individuals serve their sentences without incident, DOC houses the state's most violent convicted felons, who committed horrific crimes in the

DECLARATION OF ROBERT HERZOG IN SUPPORT OF PLAINTIFF'S MOTION FOR PRELIMINARY INJUNCTION 2:18-cv-01115-RSL

ATTORNEY GENERAL OF WASHINGTON 800 Fifth Avenue. Suite 2000 Seattle, WA 98104-3188 (206) 464-7744

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community and can continue to act out violently in prison when given the opportunity. The Department, therefore, has strict policies and procedures designed to limit the items that may be brought into correctional facilities, to avoid the introduction of weapons and other contraband. This includes the use of walk-through and hand-held metal detectors for visitors and x-ray scanning of all incoming packages and hand-carried items. Unfortunately, despite the Department's vigilance, some contraband evades screening and detection and makes it into the facilities. The Department continually discovers new methods of introducing serious contraband into facilities, with contraband disguised or hidden by various means. A few examples of these methods may help illustrate the challenge: cell phones are dismantled to avoid obvious visual detection and sent to incarcerated individuals in packages with authorized items; visitors have worn the same shoes as those provided to incarcerated persons—shoes packed with contraband—and the shoes are swapped under the visiting table; incoming letters and envelopes are soaked in methamphetamine; strips of suboxone are hidden behind stamps, flaps of envelopes, or hidden among pages of fake incoming legal mail; hand-fashioned edged weapons are discovered hidden in many places, including most recently in an incarcerated person's body cavity; and most notably, over the

6. Prisons employees rely upon their experience and knowledge of the various types of contraband to aid in their visual and electronic methods of discovery. As new ways are designed to disguise contraband, or new designs of common items that previously would

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past two years visual and electronic searches of incoming hand carried items resulted in the

discovery of 12 loaded firearms that otherwise would have made it into the secure perimeter

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of the prisons.

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DECLARATION OF ROBERT HERZOG IN SUPPORT OF PLAINTIFF'S MOTION FOR PRELIMINARY INJUNCTION 2:18-cv-01115-RSL ATTORNEY GENERAL OF WASHINGTON 800 Fifth Avenue. Suite 2000 Scattle, WA 98104-3188 (206) 464-7744 have been be easy to identify and detect, discovery becomes much more challenging and the risk significantly increases.

- 7. It is a crime to bring a firearm onto prison grounds. Wash. Rev. Code § 9.41.300. Contraband in the form of firearms would present an extreme risk to institutional safety and security. The Department successfully mitigates this risk through scanners and other equipment designed to detect metal weapons. The existence of 3-D printed plastic firearms, weapons that are undetectable using metal detectors, would fundamentally undermine our ability to maintain safe and secure correctional facilities. The challenge presented by these weapons would be particularly difficult because they evidently are assembled from separately "printed" pieces that would not necessarily be recognizable could therefore be smuggled into facilities, or otherwise passed to individuals on escorted leave or work crews in the community, in ways that are not necessarily detectable. Community work crews comprised of incarcerated individuals often attempt to smuggle contraband back into our prisons. Persons not incarcerated can know the locations where our crews work and hide contraband for work crew members. Often this contraband is either swallowed or inserted into a body cavity to aid in the introduction into the prison.
- 8. The safety risks presented by 3-D printed firearms are not limited to prisons and work release facilities. As noted, DOC supervises over 19,000 individuals in the community. DOC Community Corrections Officers (CCOs) do this work, which can be dangerous. CCOs are limited authority peace officers and have arrest authority. They enforce conditions of community custody imposed by the court and by the Department, including the statutorily mandated prohibition that felons not possess firearms. Although other law enforcement agencies can speak more generally about the public safety risk of undetectable

DECLARATION OF ROBERT HERZOG IN SUPPORT OF PLAINTIFF'S MOTION FOR PRELIMINARY INJUNCTION 2:18-cv-01115-RSL ATTORNEY GENERAL OF WASHINGTON 800 Fifth Avenue. Suite 2000 Seattle, WA 98104-3188 (206) 464-7744

1	and untraceable 3-D printed weapons, it is difficult to overstate the danger they would
2	present in the hands of high risk, violent felons DOC CCOs are responsible for supervising
3	in the community.
4	9. In summary, the Washington Department of Corrections is gravely concerned
5	that the existence and availability of 3-D printed firearms would substantially undermine its
6	ability to protect the public. Plastic firearms would be difficult to detect when smuggled into
7	prisons and work release facilities, and once inside, could be used to harm or kill staff,
8	visitors, and incarcerated individuals, and aid in the escape of incarcerated persons.
9	Additionally, the availability of 3-D printed firearms to felons on community custody would
10	present an unacceptable risk of harm to CCOs and the public.
11	I declare under penalty of perjury under the laws of the State of Washington and the
12	United States of America that the foregoing is true and correct.
13	DATED this _3_ day of August 2018, at Tumwater, Washington.
14	24011
15	ROBERT HERZOG
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1 The Honorable Robert S. Lasnik 2 3 4 5 6 7 UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON 8 AT SEATTLE 9 STATE OF WASHINGTON, et al. NO. 2:18-cv-01115-RSL 10 Plaintiffs, **DECLARATION OF** 11 MARY B. McCORD V. 12 UNITED STATES DEPARTMENT OF 13 STATE, et al., 14 Defendants. 15 I, Mary B. McCord, pursuant to 28 U.S.C. § 1746, hereby declare and say as follows: 16 1. I am over the age of 18 and have personal knowledge of all the facts stated in 17 this declaration. 18 2. I am currently a Senior Litigator and Visiting Professor of Law at the Institute 19 for Constitutional Advocacy and Protection at Georgetown University Law Center in 20 Washington, D.C. I have held this position since July 1, 2017. In this position, I have 21 represented cities, businesses, and individuals in lawsuits raising a variety of constitutional and statutory issues. I have also authored or co-authored several amicus briefs on behalf of current 22 and former federal, state, and local prosecutors and law enforcement officials, and have co-23 authored letters to government officials on behalf of former national security officials. 24

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3. Prior to holding my current position, I was the Acting Assistant Attorney General for National Security at the Department of Justice from October 2016 through mid-May 2017, and the Principal Deputy Assistant Attorney General for National Security at the Department of Justice from May 2014 through October 2016. In those roles, I oversaw all federal counterterrorism, espionage, and export-control prosecutions. These included prosecutions of terrorists brought to the United States from abroad for terrorist acts committed overseas, as well as prosecutions of terrorism-related offenses committed within the United States. It also included prosecution of cases arising from violations of the Arms Export Control Act (AECA), 22 U.S.C. § 2751 et seq., and the International Trafficking in Arms Regulations (ITAR), 22 C.F.R. §§ 120-130. In addition, my responsibilities included representing the Department of Justice at interagency policy meetings, including Deputies Committee meetings, held by the National Security Staff of the Executive Office of the President, on a full range of national security issues including counterterrorism policy, terrorist threats to aviation, border security, export control policy, arms control policy, intelligence collection, cyber threats to national security, and foreign attempts to influence the U.S. elections, among others. My work put me in close contact with officials from all of the national security departments and agencies, including the Departments of Defense, Homeland Security, State, and the Treasury, and the intelligence community, among others.

4. Prior to my position in the National Security Division at the Department of Justice, I was an Assistant United States Attorney (AUSA) for the District of Columbia from October 1994 to May 2001 and July 2002 through May 2014. During my tenure as an AUSA, in addition to prosecuting at trial and litigating on appeal in cases arising under federal and District of Columbia criminal law, I served as a Deputy Chief of the Sex Offense Section for one year, Deputy Chief of the Appellate Division for six years, and Chief of the Criminal Division for two years. As Chief of the Criminal Division, I supervised all federal violent and organized crime prosecutions, including narcotics and gun trafficking; all federal white collar offenses; and all prosecutions of federal national security offenses (in conjunction with the

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officials at the National Security Division of the Department of Justice). My work put me in close contact with law enforcement officials at the Federal Bureau of Investigation, the Bureau of Alcohol, Tobacco, Firearms, and Explosives, and the Department of Homeland Security, among others.

- 5. This declaration is submitted in support of the request for an injunction filed by the States of Washington, California, Connecticut, Colorado, Delaware, Hawaii, Illinois, Iowa, Maryland, Minnesota, New Jersey, New York, North Carolina, Oregon, Rhode Island, Vermont, the Commonwealths of Virginia, Massachusetts, and Pennsylvania, and the District of Columbia ("plaintiff States").
- 6. I have considered the likely impacts of an unrestricted export of Defense Distributed's Computer Aided Design (CAD) files to any interested person, entity, or foreign power, and have concluded that its likely effect would be detrimental to the national security, foreign relations, and public safety interests of the United States and the plaintiff States.

### Unrestricted Export Would Threaten To Defeat Existing Security Protocols on Which Public Safety Depends

- 7. A plastic firearm that is both fully operable and virtually undetectable by conventional security measures would threaten to defeat existing security protocols on which public safety depends. Such a device would rarely, if ever, be detected by metal detectors, which form the backbone of well-developed protocols used across the United States and around the world for public safety.
- 8. Metal detectors stand between those carrying firearms and boarding airplanes, entering packed stadiums and arenas, attending concerts, visiting courthouses and other government buildings, and—increasingly—going to school.
- 9. A plastic firearm, including a 3D-printed plastic firearm, would evade this well-honed system because there would be no current-conducting metal on which the detector would alert.

- 10. Although the federal Undetectable Firearms Act, 18 U.S.C. § 922(p), requires firearms to include enough metal to be detectable by a walk-through metal detector, this requirement easily could be evaded by bad actors who seek to smuggle 3D-printed plastic firearms through such metal detectors. For example, it is my understanding that the Defense Distributed CAD files for the "Liberator" 3D-printed plastic firearm include the insertion of a six-ounce piece of metal to comply with this requirement, but that the metal piece can be removed without rendering the firearm inoperable.
- 11. Although most firearms ammunition should be detectable by metal detectors, depending on the sensitivity and calibration of the equipment used, a single bullet might be undetectable.
- 12. The law enforcement and national security community, of which I was a part for more than 20 years, has consistently expressed concerns about the development of plastic weapons—whether firearms or improvised explosive devices—that can evade detection by metal detectors.
- 13. Allowing widespread private manufacture and access to operable 3D-printed plastic firearms would seriously undermine the utility of one of the primary currently available forms of protection for sensitive and/or crowded sites nationwide and worldwide.

#### **Unrestricted Export Would Pose Serious National Security Risks**

- 14. The export of CAD files for the manufacturing of 3D-printed plastic firearms means that the files will be available not only to U.S. persons (U.S. citizens and Lawful Permanent Residents (LPRs)), but also to foreign persons both inside and outside of the United States. See 22 CFR § 120.17 (defining "export" for purposes of ITAR to include "transmission" of technical data "out of the United States in any manner" and "releasing or otherwise transferring technical data to a foreign person in the United States").
- 15. Unrestricted export of these CAD files means that bad actors, including members of foreign terrorist organizations and those inspired by them, both inside and outside

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of the United States, would be able to make undetectable and untraceable firearms that could be used to inflict harm on persons residing in or visiting the State of Washington and other plaintiff States.

- 16. Foreign terrorist organizations like al-Qa'ida and ISIS have long encouraged the use of firearms to commit acts of terrorism on U.S. soil in the name of those groups. Such terrorist organizations call on individuals to cause as much bloodshed as possible in the hope of spreading fear, gaining notoriety, and attracting additional followers. Individuals such as Omar Mateen, the shooter at Orlando's Pulse Nightclub who killed 49 people, and Syed Farook and Tashfeen Malik, the shooters at a county government training event in San Bernardino, California, who killed 14, have, regrettably, answered that call.
- 17. Thus far, those in the United States who have been susceptible to terrorists' call to violence have in some instances been limited in the bloodshed that they are able to cause with firearms. That appears due, at least in part, to the security protocols, and in particular the metal detectors, that hinder them from being able to bring firearms into crowded, heavily-attended places. Would-be terrorists know that they currently would likely fail if they tried to enter, for example, Seattle's CenturyLink Field with a metal firearm, due to the stadium's use of walk-through metal detectors.
- 18. With the unrestricted export of files facilitating the private manufacture of 3D-printed plastic firearms, the 72,000 fans who pack CenturyLink for a Seahawks game suddenly would become much more vulnerable to terrorists who seek to cause as much bloodshed as possible. The ability to bring firearms undetected to public spaces and then open fire as widely and indiscriminately as possible is a longstanding tactical objective for groups such as al-Qa'ida and ISIS.
- 19. With the availability of the CAD files for the manufacturing of 3D-printed plastic firearms, members of foreign terrorist organizations abroad, and those inspired by them, may travel to the United States for the purpose of making such weapons and using them to commit a terrorist attack in one of the plaintiff States. In addition, members of foreign terrorist

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organizations outside the United States, and those inspired by them, may manufacture 3D-printed plastic firearms abroad and attempt to smuggle them into the United States, whether by land, air, or sea. These plastic firearms would prove more difficult to detect than conventional metal firearms, depending on the screening systems used at the various entry points.

- 20. In addition, in my experience, foreign terrorist organizations have made a priority of targeting commercial aviation and aggressively pursue innovative methods to undertake attacks, including by smuggling undetectable explosives onto commercial airplanes. The availability of the CAD files for manufacturing 3D-printed plastic firearms increases the risk that members of foreign terrorist organizations and those inspired by them will successfully be able to bring such weapons onto a commercial airplane bound for the United States. Even if foreign airports that are the last points of departure for the United States utilize security screening devices such as millimeter wave imaging technology, designed to detect metallic and non-metallic items, vulnerabilities in those systems and the persons who operate them increase the risk of 3D-printed plastic firearms being used to commit an in-air attack, including a hijacking. They also increase the risk that 3D-printed plastic firearms made abroad could be transported in the checked baggage of passenger planes or on cargo planes bound for the United States, for use in a possible terrorist attack in one of the plaintiff States.
- 21. In addition to the above, metal detectors represent the principal means of protecting prominent federal, state, and local officials in their frequent public appearances. One goes through a metal detector before entering the White House, the Supreme Court, and the Capitol in Washington D.C., as well as iconic buildings in many state capitals—and even at many campaign events and rallies for candidates not yet elected to public office.
- 22. There are numerous foreign adversaries intent on causing chaos and confusion in the United States. Increasing the ability to bypass existing security protocols with an undetectable firearm would provide an assassination option for hostile foreign actors that is currently much more difficult, and thus presents a serious national security risk.

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#### **Unrestricted Export Would Harm Foreign Relations**

- 23. The United States and other countries rely on international arms embargoes, export controls, and other measures to restrict the availability of defense articles, including firearms, sought by foreign terrorist organizations. Unrestricted access to the CAD files for manufacturing 3D plastic firearms would allow these organizations and those inspired by them to readily manufacture and use such weapons in foreign countries, harming U.S. foreign relations with those countries.
- 24. Wide international access to the CAD files would likewise provide armed insurgent groups, transnational criminal organizations, and foreign countries subject to U.S. or U.N. arms embargoes (such as North Korea and Iran) with technology allowing for the ready manufacture of 3D-printed plastic firearms and components. This would undermine global export control and non-proliferation regimes designed to prevent the dangerous spread and accumulation of weapons and related technologies, damaging U.S. leadership in this area.
- 25. Even if IP addresses located in hostile foreign countries such as North Korea and Iran were blocked by Defense Distributed from accessing the CAD files, there are multiple ways to defeat an IP block, including through the use of proxies and virtual private networks.
- 26. Easy internet access to the CAD files also could contribute to increased armed conflict and crime in countries with which the United States seeks to maintain good relations, causing destabilizing effects on economies and societies. Such destabilization would negatively impact U.S. foreign relations with those countries and could result in damage to the economies of the plaintiff States and their citizens who have family members and business interests in those countries.
- 27. If the CAD computer files were used to assemble an undetectable 3D-printed plastic firearm in a foreign country, and that weapon were then used to commit an act of terrorism, piracy, or other serious crime, this sequence of events, and the foreign country's likely interest in holding the United States accountable, could cause very serious and lasting harm to the foreign relations interests of the United States.

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28. That risk is particularly great because many foreign countries, including critical allies like Canada, the United Kingdom, and Japan, have more restrictive firearms laws than those in the United States. Unrestricted export of the CAD files for use in manufacturing 3D-printed firearms would undercut the domestic laws of those countries and increase the risk of violence there, thereby damaging U.S. foreign relations with those countries.

### Unrestricted Export Would Undermine Law Enforcement's Ability to Investigate and Solve Crimes Committed with Firearms

- 29. The ready availability of the CAD files would mean that 3D-printed plastic firearms may be privately manufactured and put into the marketplace with no serial numbers, making them untraceable by law enforcement, which would seriously impede the ability to investigate and solve crimes committed with firearms.
- 30. Under federal law, all firearms manufactured for commercial sale in the United States are required to bear a serial number which, along with other required markings on the firearm, generally allow it to be uniquely identified. When a law enforcement agency recovers a firearm, it can submit the serial number and other identifying details to the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) to "trace" the gun to the federal firearm licensee who made the first retail sale of the firearm, thus leading to the identity of the first retail purchaser of the firearm.
- 31. In individual cases, a successful firearms trace can lead to the perpetrator of a crime or to a person who may have relevant information about a particular crime. In my experience as a federal prosecutor, firearms trace information frequently led to information relevant to solving violent crimes, including by revealing "straw" purchasers, or those who purchased a gun for someone legally prohibited from buying or possessing a firearm.
- 32. Firearms trace information can also be helpful in discerning meaningful patterns in gun trafficking, for example, by identifying gun buyers who are responsible for purchasing a disproportionate share of firearms recovered from crime scenes in certain areas

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or gun sellers who supply a disproportionate share of firearms used in crime and may wittingly or unwittingly be fueling illegal gun trafficking.

- 33. Although federal law requires all firearms manufactured for commercial sale in the United States to have serial numbers, bad actors who download the CAD files for the manufacture of 3D-printed plastic firearms readily can evade this requirement and produce undetectable and untraceable firearms.
- 34. Law enforcement agencies in the plaintiff States that locate 3D-printed plastic guns that have no serial numbers will have no information from which to seek a firearms trace from the ATF, reducing their ability to solve crimes in their jurisdictions. This is so even if the 3D-printed plastic gun is in compliance with the Undetectable Firearms Act.
- 35. In addition, it is my understanding that the plastic barrel of a 3D-printed plastic gun does not contain grooves called "rifling" that leave unique striations on the soft outer metal of bullets fired from it. This means that law enforcement agencies and prosecutors will not be able to rely on forensic experts to match bullets used to commit crimes with the firearms from which they were shot.
- 36. When a gun is fired and the bullet speeds down the barrel, it encounters ridges and grooves that cause it to spin, increasing the accuracy of the shot. Those ridges dig into the soft metal of the bullet, leaving striations. At the same time that the bullet is blasted forward, the cartridge case explodes backward with equal force against the mechanism that absorbs the recoil, stamping an impression into the soft metal at the base of the cartridge case, which is then ejected from the gun.
- 37. When a law enforcement agency recovers bullets or cartridge cases from a crime scene, forensic examiners can test-fire a suspect's gun to see if it produces striations and impressions that match the evidence. When there is a match, prosecutors may rely on a firearms identification expert to testify that the microscopic striations and impressions left on bullets and cartridge cases are unique, reproducible, and therefore, like "ballistic fingerprints" that can be used to identify a gun.

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38. In my experience, firearms identification has produced valuable evidence to support prosecutions of violent crimes committed with firearms. Law enforcement agencies that locate bullets shot from 3D-printed plastic firearms will not be able to rely on firearms identification to prove that the bullets were shot from a suspect's 3D-printed plastic firearm, reducing the ability of law enforcement agencies in the plaintiff States to solve crimes committed with such weapons.

## Federal and State Laws Do Not Adequately Protect Americans from the Threat Posed by Plastic Guns

- 39. Federal and state regulation of the manufacture and sale of firearms is based on the premise that commercial firearms production and distribution require an investment of resources that makes it feasible only for commercial entities, which must comply in order to maintain their licenses. The wide availability of the CAD files for the production of 3D-printed plastic handguns in the home, and the ubiquity and relative low cost of 3D printers, would upend the entire regulatory regime.
- 40. Bad actors who seek to make or sell 3D-printed firearms for criminal purposes have no motivation to comply with federal or state firearms laws, and can easily evade them because of the ready ability to make the weapons cheaply and with minimal equipment. Although bad actors today can purchase firearms on the black market, or through straw purchasers, obtaining firearms from such illicit sources increases the costs to the purchasers, who still bear the risk that those firearms might be traced back to them by law enforcement. That risk is minimal for 3D-printed plastic firearms that contain no serial numbers and are not distributed by licensed firearms dealers. Moreover, by bypassing licensed firearms dealers, purchasers of 3D-printed plastic firearms also bypass background checks required under current federal law.
- 41. Laws such as the Undetectable Firearms Act, while laudable, do little to deter bad actors—whether terrorists, drug dealers, or domestic abusers—from making 3D-printed plastic weapons such as the Liberator without the non-functional piece of metal required to

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comply with the Act. This is especially so where the weapons will never pass through the hands of a licensed firearms dealer whose livelihood depends on compliance with federal and state regulations.

- 42. In my judgment, the entry of an injunction in this matter would help to prevent the further dissemination of any Defense Distributed CAD files for the manufacture of 3D-printed plastic firearms that may have been made available via the internet, thereby decreasing the risk of harm to the national security and foreign relations interests of the United States and to the public safety and law enforcement interests of the plaintiff States.
- 43. I am not receiving compensation for offering my opinion in this case. I am serving pro bono because of my grave concerns about the dangers of the unchecked global release of Defense Distributed's CAD files for the manufacture of 3D-printed plastic firearms.

I declare under penalty that the foregoing is true and correct.

DATED this 1/h day of August, 2018, at Washington, District of Columbia.

Mary B. McCord

1		The Honorable Robert S. Lasnik
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7	UNITED STATES DISTRICT COURT	
8	WESTERN DISTRICT OF WASHINGTON AT SEATTLE	
9	CTATE OF WARIINGTON of al	NO 2.19 ov 01115 DCI
10	STATE OF WASHINGTON, et al.	NO. 2:18-cv-01115-RSL
11	Plaintiffs,	DECLARATION OF BRIAN KYES
12	V.	
13	UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his	
14	official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE	
15	CONTROLS; MIKE MILLER, in his official capacity as Acting Deputy Assistant Secretary	
16	of Defense Trade Controls; and SARAH HEIDEMA, in her official capacity as Director	
17	of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND	
18	AMENDMENT FOUNDATION, INC.; and CONN WILLIAMSON	
19	Defendants.	
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21	I, Brian Kyes, declare as follows:	
22	I am over the age of 18 and have personal knowledge of all the facts stated herein.	
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DECLARATION OF BRIAN KYES

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- 2. I am the Chief of Police of the Chelsea Police Department. I was originally appointed as a Patrol Officer for the Chelsea Police Department in 1987 and was promoted to the rank of Sergeant in 1994, Lieutenant in 1996, and Captain in 2002. I have served in my current position as Chief of Police since 2007.
- 3. I serve as the President of the Massachusetts Major City Chiefs of Police Association, Inc. (the "MMCC"). MMCC's members include chiefs of police from approximately forty communities in Massachusetts. MMCC is committed to reducing and preventing crime and has a special focus on stopping gun violence. In addition, I serve on the Municipal Police Training Committee, which establishes and enforces training standards for municipal police officers in the Commonwealth.
- 4. I hold a bachelor's degree from Framingham State College, a master's degree from Anna Maria College, and a Juris Doctor degree from Suffolk University Law School. I have also attended numerous professional development certification programs, including programs with the FBI National Academy, the Naval Postgraduate School, and Harvard University.
- 5. As Chief of the Police of the Chelsea Police Department, I oversee over 100 sworn officers.
- 6. During my career, I have investigated and supervised hundreds of cases involving firearms.
- 7. Individuals who can locate Defense Distributed's computer-aided design (CAD) codes and who have access to an internet connection and 3D printer are able to click and print a lethal "ghost gun" that is unregulated and untraceable. The easier it is to find these codes, the easier it is to print a firearm.

- 8. The plastic firearms made using 3D printers do not have serial numbers or other identifiable marks and can easily be made to evade metal detectors and wands.
- 9. This development is very concerning. Serial numbers on firearms serve an important public safety function. If someone uses a firearm to commit a crime, federal, state, and local law enforcement agencies can access the Bureau of Alcohol, Tobacco, Firearms and Explosives' National Tracing Center (the "NTC") to track the serial number to determine who may have owned or possessed the firearm at the time of the crime.
- 10. Using the serial number, the NTC is able to track the movements of a firearm from its manufacturer or importer through the distribution chain until it finds the gun dealer. The gun dealer is required to keep a record of who purchased the gun, and with that information law enforcement can attempt to locate and interview the purchaser and anyone involved in a subsequent transfer.
- 11. Firearms produced using 3D printers without serial numbers are untraceable under current systems. These "ghost guns" are off-the-grid and will evade government oversight. It will be difficult, if not impossible, to determine who manufactured, purchased, or owned any such firearm used to commit a crime.
- 12. Approximately half of the firearms recovered by the Chelsea Police Department during investigations already have obliterated serial numbers. When the serial number is fully obliterated, a successful trace through the NTC is not possible. Police departments in Massachusetts's other major cities face similar challenges.
- 13. The proliferation of unregulated and untraceable firearms significantly hampers law enforcement's ability to stop and apprehend individuals involved in acts of violence committed with firearms. The Chelsea Police Department and others around Massachusetts trace

thousands of firearms every year. These traces are a critical tool to help solve crimes and prevent future gun violence.

- 14. Police in Massachusetts further rely on the results of gun traces to identify ways in which firearms enter the illegal market, and to inform strategies to combat the illegal trafficking of firearms.
- 15. If there is a sudden increase in the number of untraceable guns, more crimes will go unsolved and bad actors will be emboldened to commit more crimes and acts of violence.
- 16. Firearms made using 3D printers present additional challenges for security. Because these guns are made from plastic, some are capable of evading metal detectors and wands. For example, the "Liberator" firearm included in Defense Distributed's CAD files presents a unique public safety risk, because it is operable and can be undetectable.
- 17. Any type of weapon that can fire a bullet and is built specifically to evade security is hugely problematic. These types of 3D-printed firearms endanger the public in venues that rely on metal detectors and wands, such as arenas, schools, airports, and courthouses.
- 18. Aside from the danger 3D-printed firearms present if intentionally fired at an individual or into a crowd, they are also prone to misfiring and exploding.
- 19. The concerns regarding 3D-printed firearms are heightened in cities where there are more arenas and government buildings that rely on metal detectors and wands to prevent dangerous individuals from bringing firearms into crowded areas.
- 20. Widespread access to blueprints and other CAD codes needed for producing 3D weapons, coupled with increasing proliferation of 3D printers, undermines Massachusetts's extensive efforts to reduce gun violence and undercuts the effectiveness of our current laws.

DECLARATION OF BRIAN KYES

1	I declare under penalty of perjury under the laws of the United States of America that the		
2	foregoing is true and correct.		
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4	DATED this 8 day of August, 2018, at Chelsen, Massachusetts.		
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6	Prior Kirls		
7	Brian Kyes		
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DECLARATION OF BRIAN KYES

1 The Honorable Robert S. Lasnik 2 3 4 5 6 7 UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON 8 AT SEATTLE 9 STATE OF WASHINGTON, et al. NO. 2:18-cv-01115-RSL 10 Plaintiffs, DECLARATION OF RON HOSKO 11 v. 12 UNITED STATES DEPARTMENT OF 13 STATE, et al. Defendants. 14 15 I, Ron Hosko, declare as follows: 16 1. I am over the age of 18 and have personal knowledge of all the facts stated in 17 this declaration. 18 2. I am the president of Law Enforcement Legal Defense Fund (LELDF). LELDF 19 is a nonprofit organization dedicated to supporting law enforcement officers by educating the 20 public about the risks and dangers they face in the line of duty and raising funds for the legal 21 defense of officers wrongfully accused or charged of crimes. I received a J.D. degree from the Temple University School of Law in 1984. 22 3. From 1984 to 2014, I served in the Federal Bureau of Investigation (FBI or 23 Bureau) as a special agent, supervisor, executive, and senior executive. I began my FBI career 24

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as a special agent in Jackson, Mississippi, and then Chicago. In 1992, I was assigned to the FBI-led Violent Crimes Task Force in Chicago, Illinois, which worked with Chicago Police detectives and representatives from other agencies in addressing violent crimes including bank robbery, extortion, kidnapping, murder for hire, drug related homicide, armored carrier robbery and other federal and local offenses from that time until early 2001. I supervised the task force from about 1995 until my transfer in 2001. The use and threatened use of firearms was a common feature of the task force's investigative efforts. From late 2001 to 2003, I led the FBI's Crisis Management Unit in Quantico, Virginia, where I worked to guide the FBI's preparation and training before critical incidents and major special events where the FBI had an interest and where I worked to develop the organization's response to critical incidents after they occurred, like 9/11, the D.C. area sniper shootings, and others. Before and after this assignment, I was also part of the FBI's preparations for and response to the 1994 World Cup, the 1996 presidential conventions, the 2002 and 2006 Winter Olympics, Hurricane Katrina, and other major events and incidents.

- 4. From 2003 to 2007, I served in the Philadelphia Field Office as assistant special agent in charge, responsible for, at various times, division administrative activities, our violent crime, violent gang, organized crime programs as well as our surveillance, technical and crisis management activities. In 2007, Director Mueller awarded me the FBI Shield of Bravery for my actions during a violent ransom kidnapping in the Philadelphia area.
- 5. In 2007, I was promoted to the Senior Executive Service as an Inspector. In that capacity, I led multiple investigations of serious and fatal shootings involving FBI and associated law enforcement personnel, and led a seminal 20-year review of FBI shooting incidents. I also conducted internal reviews of FBI components, programs and personnel.
- 6. In 2010, I was promoted Special Agent in Charge of the Washington (D.C.) Field Office's Criminal and Cyber branch. In that role, I was responsible for strategic management and oversight of the office's investigations involving financial crimes, public

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Appendix

corruption, transnational organized crime, violent criminal enterprises, and violent crimes, as well as all cyber activities including national security threats and criminal intrusions.

- 7. In 2012, I was named Assistant Director of the FBI's Criminal Investigative Division. As Assistant Director, I led the Bureau's largest program worldwide, managing several hundred FBIHQ employees, and ultimately reporting to the FBI Director. Among the tens of thousands of criminal investigations the FBI conducted during my tenure as Assistant Director, I oversaw the multiple high-priority and -visibility investigations of violent persons and organizations—including one involving a southern Alabama man who held a five-year old hostage in a homemade bunker after he shot and killed the boy's bus driver; the armed and violent kidnaping and hostage-taking of the father of a North Carolina prosecutor by Bloods gang members and associates; and the violent kidnaping of Hannah Anderson in the San Diego area who was taken after the murder of her family members. In each of these cases involving the large-scale deployment of FBI personnel and resources, I was responsible for oversight of the FBI response, the integration of the FBI Hostage Rescue Team with other investigative and technical assets, and the rescue of the victims. I retired from the FBI in 2014.
- 8. Over the course of my 30-year FBI career, I developed a broad understanding of the wide array of the threats impacting the FBI mission (as well as that of our investigative partners in North America and around the globe), and the process by which the FBI prioritized its resources and cases. Through my experience at the FBI, I gained a deep understanding of the risks posed by various groups, people, and things (including firearms) that threaten the safety and security of Americans and U.S. residents, including criminal and national security threats. Based on my knowledge, training, and experience, I am an expert in the dangers and risks illegal firearms pose to public safety, the strategies and methods employed to investigate firearms-related crimes, and the serious challenges undetectable, untraceable firearms present for law enforcement.
- 9. Throughout my FBI career, among the Bureau's top criminal investigative priorities was the threat posed by violent gangs and other domestic and international criminal

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enterprises—particularly those trafficking illegal drugs, weapons, or the proceeds from their sale (both domestically and across national borders). Accordingly, we at the FBI worked diligently to identify people and enterprises involved with the illegal acquisition, production, distribution, concealment, use, and sale of dangerous contraband, including firearms.

- 10. The FBI's investigative work (as well as that of our federal, state, local, and tribal partners) routinely included identifying unlawful possession, use, and related activity involving firearms. Firearms were commonly associated with violent criminal activity by individuals and enterprises. Agents, and their Assistant U.S. Attorney colleagues, work to identify and seize illegal firearms, remove them from the streets, trace their history of possession and use, and bring criminal prosecution where appropriate. Working with the FBI Laboratory and other forensic facilities, FBI agents will also try to "raise" obliterated serial numbers from seized firearms.
- 11. Serial numbers on firearms play an essential role in helping law enforcement officials trace ownership and possession of weapons and commonly lead to prosecution under applicable law(s).
- 12. Based on my 30 years in law enforcement, including my years as a supervisor, executive and senior executive, I believe "plastic guns" with no serial number or uniquely identifying marking that can be created with a 3D printer presents law enforcement with very real and serious concerns.
- 13. Firearms with no serial numbers or obliterated serial numbers make tracking ownership and possession of unlawfully possessed and used guns far more difficult for law enforcement. Widespread production and distribution of 3D-printed guns would greatly hinder law enforcement in its work and likely facilitate a worrisome increase in unsolved homicides and other gun crimes.
- 14. Additionally, current widely-used detection technologies like magnetometers serve both public and private safety and security officials' objectives because of their ability to locate dangerous and prohibited metallic objects, like concealed firearms. Changing

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firearms composition to entirely or primarily plastic, particularly where the functioning weapon can be readily disassembled and reassembled, would, I believe, exponentially increase the risk of "plastic guns" being smuggled into events and places that now have security controls to prevent their presence and use.

- 15. More broadly, based on my experience, I would assess that, despite the notion that only those who could afford a 3D printer would have ready access to "plastic guns", wellfunded criminal enterprises (as well as business-minded private individuals) could and would quickly embrace this technology for use in engaging in the violence, proceeds-collection, and retaliation that commonly attends the work of these organizations. Every year in America, thousands of illegal guns are taken off the streets by law enforcement and thousands of residents are charged with firearms offenses in state and federal courts. Illegally possessed and used firearms are involved in the vast majority of U.S. homicides. This tracks my own experience in the FBI, where the great majority of gang and violent crime the organization addressed had a significant component involving firearms that were unlawfully possessed and/or used. As an assistant director, I directed our personnel to make aggressive use of federal statutes governing such activity in order to ensure armed felons were removed from society for the maximum potential time. I and we were fully aware that it was quite common for criminally-inclined persons to have felony convictions that should have limited their possession and use of a firearm. However, it was also quite common for convicted felons to reoffend while possessing and/or using a firearm. Federal and state laws did too little to prevent such activity, despite the efforts of the FBI and other law enforcement agencies. The risks of ready access to firearms in America are self-evident and include thousands of firearms homicides, armed robberies, and other crimes involving the use of a firearm every year. It is my assessment that plastic, 3D-printed firearms would only exacerbate the existing threat.
- 16. In sum, I believe the risks posed by 3D-printed plastic guns having no serial numbers or uniquely identifying markings with which possessors would be reliably tied to producers are unacceptably high to American society. I believe such firearms would only add

1 to the existing risk of homicide, armed robbery, aggravated battery and assault, as well as other 2 crimes by way of those additional criminally-inclined offenders who believe a "plastic gun" would afford them the opportunity of avoiding detection or accountability. Finally, having 3 3D-printed firearms designs freely available on the Internet, would be, in my opinion, as 4 misguided as posting online instructions on the construction of improvised explosive devices, 5 distilling castor beans into ricin, or any other detailed and accurate information that has a great 6 likelihood of being utilized for malevolent purposes. 7 I am not receiving compensation for submitting this declaration, which I have 17. 8 provided to help the Court understand the serious and predictable dangers to the safety and 9 security of Americans that worldwide dissemination of Defense Distributed's 3D-printable gun 10 files would create. I declare under penalty of perjury under the laws of the State of Washington and the 11 United States of America that the foregoing is true and correct. 12 DATED this 1th day of August, 2018, at Alexandrie, Virginia. 13 14 15 16 17 18 19 20 21 22 23 24

1 The Honorable Robert S. Lasnik 2 3 4 5 6 7 UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON 8 AT SEATTLE 9 STATE OF WASHINGTON, et al. NO. 2:18-cv-01115-RSL 10 Plaintiffs, **DECLARATION OF** 11 JOSEPH BISBEE v. 12 UNITED STATES DEPARTMENT OF 13 STATE, et al., 14 Defendants. 15 I, Joseph Bisbee, declare as follows: 16 I am over the age of 18 and have personal knowledge of all the facts stated in 17 this declaration. 18 2. I am the principal officer of Armed With Knowledge (AWK), a business aimed 19 at education and outreach in regards to firearms issues and providing assistance on policy 20 development and investigations to government, law enforcement and related organizations. 21 AWK focuses on several areas including public education, policy development, strategies to reduce firearms related violent crime, and expert consulting. 22 3. Prior to creating AWK, between 1989 and March 2015, I was employed as a 23 special agent for the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF). Between 24

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September 1989 and April 1995, I was assigned to the Youngstown, Ohio Field Office. The majority of my investigations related to firearms violations, including the identification and investigation of firearms traffickers operating between Ohio and such market areas as Detroit, Michigan; Philadelphia, Pennsylvania; and others.

- 4. In April 1995, I was promoted to the Firearms Enforcement Branch, Bureau Headquarters (BHQ) as a project officer. During this time, I was an active participant in the development and implementation of firearms related investigative programs within ATF. I also met with high ranking Bureau and Treasury representatives regarding monitored cases and conducted training sessions on firearms trafficking related issues. In 1998, BHQ asked me to lead the ATF/US Customs, Country Assessment for Barbados in relation to their capabilities in addressing firearms related violent crime as well as investigations of illegal firearms.
- 5. Between November 1997 and February 2001, I was assigned to ATF's Washington Group II Field Office. This office is devoted to the investigation of firearms trafficking violations. During this period, I conducted numerous domestic illegal firearms trafficking investigations and because of my expertise in this area, was selected by BHQ to be the case agent on a sensitive investigation involving the attempted assassination of the Police Commissioner of Japan.
- 6. Between February 2001 and January 2004, I was assigned to the US Consulate in Vancouver, B.C., Canada, as ATF's Assistant Country Attaché. In this position I was tasked with coordinating international firearms trafficking investigations as well as providing training to Canadian law enforcement on firearms related matters. In 2002, BHQ assigned me to be the US representative to the Trafficking in Small Arms Working Group in relation to the G-8 Summit in Alberta, Canada.
- 7. Between January 2004 and September 2012, I returned to ATF's Washington Group II Field Office and again focused on illegal firearms trafficking investigations. I have been the case agent on numerous investigations in which hundreds of firearms have been

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identified as illegally moving between source States such as Ohio, West Virginia, Kentucky, North Carolina, and others; and market areas including the Washington, D.C. metropolitan region. As a result of my experience in the firearms trafficking arena, the March 2008 issue of the Washingtonian Magazine profiled me as "the top federal gun-hunter in DC". Also, in 2010, BHQ asked that I be the ATF investigative representative for the El Salvador Country Assessment. I utilized information gathered from meetings with numerous law enforcement, military, and government leaders to recommend ways El Salvador can improve its efforts in addressing firearms crime.

- 8. In September 2012, I was promoted to the Seattle Field Division as the Group Supervisor for the ATF Violent Gang Task Force. This Group focuses on armed violent criminals and criminal organizations utilizing firearms illegally. Many of the investigations I oversaw involved the illegal trafficking of firearms to criminal street gangs and Mexican Drug Trafficking Organizations in which Washington was the source State.
- 9. I have received instruction in both general and specific courses in pursuing firearms trafficking investigations. This training includes study at the Federal Law Enforcement Training Center with successful completion of Criminal Investigator School and New Agent Training, which dealt with ATF specific instruction. I also attended and successfully completed ATF Firearms Interstate Nexus School and Advanced Interstate Nexus School, which provided specific instruction on determining the origin and movement of firearms and ammunition.
- 10. I have been an instructor on firearms related investigative activity to local law enforcement officers in the State of Ohio; the International Law Enforcement Academies in Budapest, Hungary and Gaborone, Botswana; the Vancouver, B.C., Police Department; the Royal Canadian Mounted Police; and many others, as well as providing instruction at ATF's International Firearms Trafficking Conferences. I was asked to prepare and present a case study on one of my firearms trafficking investigations to the FBI's National Academy for State

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and Local Law Enforcement. I have also provided firearms trafficking training to new agents at ATF's National Academy in Glynco, Georgia.

- 11. I have been involved in hundreds of investigations into illegal firearms trafficking and have been the case agent on numerous investigations involving organized groups illegally acquiring and disposing of firearms. These investigations have involved thousands of firearms. The majority of these cases involved the interstate movement of firearms, but I have also been involved in the investigation of international trafficking in firearms.
- 12. I have previously testified as an expert witness in U.S. District Court and Superior Court (Washington, D.C.), in the areas of determining the origin and movement of firearms, illicit prices of illegally trafficked firearms, firearm trafficking indicators, and other issues related to illegal firearms trafficking.
- 13. Title 18 USC Section 921 defines a firearm under federal law as any weapon which will or is designed to or may readily be converted to expel a projectile by means of an explosive charge. The definition also includes the frame or receiver of any such weapon, as well as firearm silencers and destructive devices. Firearms themselves are commonly separated into subcategories of Title I and Title II firearms. Title I firearms are the more common types of firearms in which only one projectile will be expelled with each pull of the trigger. Title II firearms include fully automatic weapons, meaning they can expel more than one projectile with each pull of the trigger. Title II firearms have additional regulations for their acquisition, possession and transport. Firearms themselves can be legal or illegal depending on several factors including the presence or absence of a serial number as well as if they have been converted from a Title I firearm into a Title II firearm. The possession of a firearm can also be illegal depending on who is possessing the firearm as well as where the possession takes place. Further the transfer of firearms can be legal or illegal dependent on several factors including the age of the individuals involved, their State of residence, and whether they possess a license to deal in firearms.

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- 14. It is currently illegal for the federal government to create a national firearms registration database. ATF is the federal agency tasked with tracing firearms that have been involved in crimes. In order to accomplish this, ATF must contact the manufacturer of the firearm and, utilizing the serial number of the weapon, determine which firearm licensees received the firearm until ultimately a final retail dealer is located. This final retail dealer then provides ATF with the identity of the first retail purchaser. It is not uncommon for this first retail purchaser to have conducted a private sale, which in many States does not require any documentation.
- 15. As previously mentioned, firearms are weapons capable of or readily converted to expel a projectile by means of an explosive charge. A firearm is also defined as the frame or receiver of any such weapon. As technology has improved and certain types of machinery has become more accessible, some groups and companies have undertaken the production of partially milled pieces of metal, commonly referred to as "80% complete receivers". These partially milled pieces of metal are not serialized and are unable to be tracked. Ultimately, the ATF Firearms Technology Branch determines if a piece of metal is merely a piece of metal, or if it has been milled to the point of being a firearm. During my time as the Assistant Country Attaché for ATF in Vancouver, Canada, I did consult with Canadian law enforcement on an organized criminal group acquiring large amounts of "80% complete receivers" with the intention of finishing the items into functioning firearms. As a result of this, I included training on "80% complete receivers" for an International Firearms Trafficking Conference I hosted in Vancouver, Canada. I am also familiar with at least one case in California involving the illegal possession of firearms that originated as partially milled pieces of metal.
- 16. 3D-printed firearms represent a step beyond partially milled receivers because unlike the latter, a 3D-printed gun may be composed entirely (or almost entirely) of plastic materials manufactured by a commercially available 3D printer. As technology improves and equipment becomes more available and cheaper, the dangers of partially milled receivers—and 3D-printed plastic firearms—will increase. The ability for rogue manufactures to provide

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functioning firearms to the criminal element will increase while law enforcement's ability to identify the illegal sources of these firearms will be severely limited. As stated earlier, law enforcement currently tracks firearms through a serial number most often applied by the manufacturer.

- 17. Criminals attempting to impede the tracking of firearms will often obliterate the serial numbers on firearms they transfer or possess. I have personally interviewed several sources of illegal firearms who either obliterated the serial number themselves or instructed others to obliterate the serial number of firearms involved in illegal trafficking. They all stated the same reason: to make it more difficult for law enforcement to identify the source of the firearm(s). While the possession of a firearm with an obliterated serial number is a crime in and of itself, I focused on these guns as indicators of firearms trafficking. As such, I implemented a program in Washington, D.C. in which I attempted to raise every obliterated serial number on recovered crime guns.
- 18. With advances in technology, non-metallic materials are now capable of being used in the firearms manufacturing process. Federal law does provide for the regulation of non-metallic materials in firearms in an effort to prevent firearms from being undetectable by magnetometers and x-ray machines. The Undetectable Firearms Act, Title 18 USC Section 922(p), makes it unlawful to possess or transfer a firearm that is not as detectable as a "Security Exemplar" in a magnetometer and does not generate an image that allows for the detection of a firearm in an x-ray machine. Unlike the definition of a firearm under Title 18, the Undetectable Firearms Act does not recognize the frame or receiver alone as a firearm. Therefore, only a "major component", i.e. the barrel, slide, cylinder, or the frame, would need to contain the appropriate amount of metal. While those involved in the legitimate manufacture of firearms follow this law to ensure public safety, criminals could easily circumvent this law with the appropriate plans, materials and equipment.
- 19. Most of the relevant laws governing the issue discussed in this declaration were enacted over 25 years ago. The advances in technology have far outpaced legislative activity.

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Criminals are always seeking access to profitable commodities. 3D-printed, non-metallic firearms that are undetectable by magnetometers and x-ray machines would be extremely profitable. In addition, the ability to track these firearms back to the source would be extremely difficult given the absence of a serial number. Ultimately, unfettered access to designs that make it easier for individuals to produce undetectable and untraceable firearms is a public safety issue.

20. I am not receiving compensation for submitting this declaration. I am serving as an expert pro bono because of the serious risk to public safety that would arise from the unrestricted distribution of 3D-printed firearms designs.

I declare under penalty of perjury under the laws of the State of Washington and the United States of America that the foregoing is true and correct.

DATED this 7<sup>th</sup> day of August, 2018, at SEATTLE, Washington.

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DECLARATION OF JOSEPH BISBEE 2:18-cv-01115-RSL

1		The Honorable Robert S. Lasnik
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6	UNITED STATES DIS	
7	WESTERN DISTRICT OF WASHINGTON AT SEATTLE	
8	STATE OF WASHINGTON; STATE OF	NO. 2:18-cv-01115-RSL
9	CONNECTICUT; STATE OF MARYLAND; STATE OF NEW JERSEY; STATE OF NEW	DECLARATION OF SHWETAK
10	YORK; STATE OF OREGON; COMMONWEALTH OF	PATEL, Ph.D
11	MASSACHUSETTS; COMMONWEALTH	
12	OF PENNSYLVANIA; DISTRICT OF COLUMBIA; STATE OF CALIFORNIA;	
13	STATE OF COLORADO; STATE OF DELAWARE; STATE OF HAWAII; STATE	
14	OF ILLINOIS; STATE OF IOWA; STATE	
15	OF MINNESOTA; STATE OF NORTH CAROLINA; STATE OF RHODE ISLAND;	
16	STATE OF VERMONT and STATE OF VIRGINIA,	
17	Plaintiffs,	
18	V.	
19	UNITED STATES DEPARTMENT OF STATE; MICHAEL R. POMPEO, in his	
20	official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE	
21	CONTROLS; MIKE MILLER, in his official	
22	capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; SARAH	
23	HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade	
24	Controls Policy; DEFENSE DISTRIBUTED;	
25	SECOND AMENDMENT FOUNDATION, INC.; AND CONN WILLIAMSON,	
2 <u>6</u>	Defendants.	

1 I, Shwetak Patel, Ph.D, declare as follows:

1. I am over the age of 18 and have personal knowledge of all the facts stated herein.

#### **Qualifications and Expertise**

Appendix

- 2. I am a professor of computer science and engineering, as well as electrical engineering, at the University of Washington in Seattle.
- 3. I received my Ph.D in Computer Science from the Georgia Institute of Technology in 2008, and my B.S. in Computer Science in 2003.
- 4. I am the recipient of a MacArthur "Genius" Fellowship (2011), Microsoft Research Faculty Fellowship (2011), Sloan Fellowship (2012), TR-35 Award (2009), World Economic Forum Young Global Scientist Award (2013), NSF Career Award (2013), and the Presidential PECASE Award (2016).
- 5. I have taught a number of classes at the University of Washington that incorporate 3D printing instruction, including how to use 3D printing software, design objects, and create them using a 3D printer. I also direct my research lab, the Ubicomp Lab, which uses 3D printing extensively in its research. In addition, I direct a graduate program that has one of the largest "makerspaces" on campus, which has scores of 3D printers available for students to use. I have purchased many 3D printers on behalf of the University of Washington. I also do my own 3D printing as a hobby, and I personally own a 3D printer. As such, I am familiar with a broad range of 3D printers, from low-end to high-end.
- 6. In sum, based on my education, research, and experience, I have expertise in 3D printing technology.

### **3D Printing Technology**

7. A 3D printer is essentially a device that can be used to "print" an object in three dimensions. Like a two-dimensional computer printer prints from Microsoft Word or other computer files, 3D printers print three-dimensional objects, also from computer files.

- 8. The vast majority of 3D printers available today use fuse deposition modeling (FDM) technology to print with "filament" rather than ink. Filament is typically made of plastic—either acrylonitrile butadiene styrene (ABS), a common type of sturdy plastic, or polylactic acid (PLA), a biodegradable plastic. FDM printers create objects via an additive process that deposits filament through a nozzle. The nozzle head moves along all three axes (x, y, and z)—left and right, up and down, forward and backward—depositing filament one layer at a time to print in three dimensions.
- 9. An FDM printer for home use typically costs about \$500–1000, though I have seen FDM printers available for as little as \$300. ABS filament is normally sold in 1-kilogram spools that cost roughly \$20–30 each.
- 10. The process of creating an object using 3D printing begins with a computer assisted design (CAD) program, which can be used to draw shapes and create the design of the object. The resulting initial CAD file is only a design and cannot be used directly for 3D printing, because a 3D printer only understands directions telling it "where to go" as it completes the printing job.
- 11. The most common file extension for a 3D printable file is .stl, which stands for stereolithography. This type of CAD file can be loaded into a 3D printer's software to communicate directly with a 3D printer by telling the printer where to move along each of the three axes in order to produce an object with specified dimensions. The intermediate internal file produced from the .stl to the 3D printer readable file is often a gcode file. Similar to a two-dimensional printable file, before printing an .stl file, you can select the desired number of copies, scale, and resolution of the printed product. Then you simply select "Print" and the 3D printer begins printing from the file.
- 12. There are commercially available software programs (such as Solid Works), and some free programs (such as Onshape, which has a free version) that can be used to convert CAD design files into .stl files that are capable of communicating directly with a 3D printer.

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13. Virtually no expertise is required to print an item from an .stl file using the default printer settings and assuming the printer is already loaded with materials. You simply open the file and click "Print."

#### **Defense Distributed's Files**

- 14. I have reviewed and tested 3D printing files that I downloaded from Defense Distributed's DEFCAD.com website on July 30, 2018. These included a .zip file containing the "complete" .stl files for a gun called the "Liberator," which the site indicated had been uploaded on July 27, 2018. The .zip file downloaded from DEFCAD.com included a total of fifteen .stl files for the individual component parts of the Liberator.
- 15. I determined that all of the .stl files for the Liberator were functional (including that they were printable) and not corrupted. I was able to open the files in my CAD software program, where I could see the complete design for the gun. I was then able to print the component parts directly from the .stl files using an Ultimaker 2+ 3D printer.
- 16. In addition to the .stl files, the Liberator .zip file also contains a "readme" text file with written instructions recommending that the user epoxy a metal part to attach to the gun in order to comply with the Undetectable Firearms Act. However, based on my review of the design files referenced above, the readme text, and online videos showing how the gun works, the Liberator is fully functional without this added metal part. It is separate from the gun's firing mechanism and is simply attached to a part of the frame that performs no function. The assembly instructions also call for an ordinary metal nail. Aside from that, all the gun needs to function is a bullet.
- 17. All of the Liberator's component parts can easily be printed on a commonly available FDM printer. The primary reasons for the price differential among FDM printers are speed, resolution, and ability to print using different types of materials, but the Liberator's design does not require a high level of precision and it can be printed out of ordinary ABS filament using a low-end FDM printer. This type of printer is available at the University of

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Washington for any UW student to use, and is also widely available for purchase, as I stated above.

- 18. A single spool of ABS filament is more than enough to print all the component parts of the Liberator. I estimate that one could print two complete guns using a single spool. My understanding is that if ABS filament is used, the barrel of the gun typically must be replaced after a couple of shots, as the material cannot withstand the heat generated by firing many shots.
- 19. In addition to the Liberator files, I also reviewed other files downloaded from the DEFCAD.com website for other types of guns, including an AR-10 and an AR-15, among others. The site also included references to where to find accessories such as bump stocks. For the AR weapons, the available files were not .stl files, but were .sldprt and .stp files, which are CAD design files of the type described above that cannot be printed directly to a 3D printer. However, these files can easily be converted to .stl using the free version of the Onshape software. Not all of the files for these other guns were complete as of July 30, 2018; some were simply high-level designs or scanned images that would not create a functional weapon if converted to .stl format and printed.
- 20. The AR-10 and other weapons require parts that must be milled out of metal. There are 3D printers available today that can print using metal instead of plastic, though they are expensive. Carbon-fiber filament is commercially available as well.

### **The Future of 3D Printing Technology**

Appendix

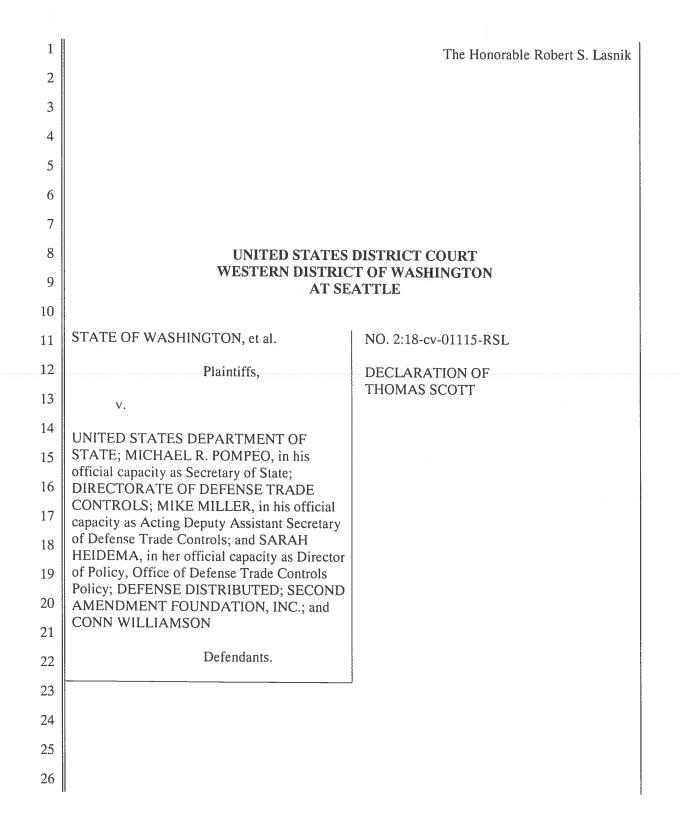
- 21. It is not currently possible to print an entire AR-10 or similar weapon using metal, but the technology is evolving rapidly. Metal filament and compatible 3D printers are currently expensive and relatively rare, but I expect they will be ubiquitous in approximately five years.
- 22. Emerging materials such as carbon-fiber filament or plastic filament containing metal particles could also be used to print the Liberator. It is widely understood in the 3D

printing field and as a matter of basic physics that carbon-fiber or metallic filament is better able to dissipate heat than plastic filament. As such, using carbon-fiber or metallic filament may enable the gun to be fired many times without replacing the barrel.

- 23. Emerging fabrication technologies will also expand the possibilities for 3D printing weapons. For example, additive 3D printing technology is the norm today, but laser cutting technology that whittles material down is also becoming available. Milling technology will make it easier to use laser cutting to produce components of weapons that cannot be made as easily with an additive process. Some of this technology is available today—our department has mills and other fabrication technologies capable of, for example, printing concrete. Emerging fabrication technologies could be used to complete a gun that cannot be made entirely using a 3D printer.
- 24. I anticipate that 3D printers will become increasingly accessible to the public, both in terms of price and availability. I understand there is a movement toward putting 3D printers in libraries for public use; the Seattle Public Library has held 3D printing workshops that are free and open to the public. 3D printers and filament are available for purchase on websites like MatterHackers.com and Amazon.com.
- 25. I believe 3D printers will become ubiquitous in the near future, both for home and commercial use. 3D printing files are like hardware that you can carry in your pocket. These files allow you to make a tangible item on demand with little more than the click of a button. This technology could be used to reduce waste and save money, because household items and consumer goods could be printed only as needed. For example, when the technology develops sufficiently, a car manufacturer will not need to incur the cost of housing a large inventory; they will be able to simply receive a customer's order and print a car that meets their specifications. I expect that increased demand for this type of technology will drive its development.

26. In sum, currently, anyone who has the .stl files and access to an FDM printer, which can cost as little as \$300, could easily print a functional weapon. Moreover, 3D printing and other fabrication technologies are advancing rapidly and will become more and more accessible, opening up the possibilities for creating other types of weapons with essentially one click. I declare under penalty of perjury under the laws of the State of Washington and the United States of America that the foregoing is true and correct. DATED this 6th day of August, 2018, at Seattle, Washington. Shwetak Patel, Ph.D 

Appendix



**DECLARATION OF THOMAS SCOTT** 

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I, Thomas Scott, declare as follows:

- I am the Executive Director of the Massachusetts Association of School Superintendents ("MASS"), a membership organization comprised of 277 superintendents and 148 assistant superintendents.
- MASS seeks to provide strategic leadership for the continuous improvement of 2. public education for all children.
- As part of this mission, MASS promotes appropriate and deep integration of technology in instruction to enhance effective teaching.
- Three dimensional ("3D") printers are widely available to students in schools across Massachusetts. Many schools include instruction on the use of such printers as part of the curriculum.
- Based on a brief survey of MASS members, it is evident that most districts 5. provide students easy access to 3D printers. In most cases students have unsupervised access As examples, one school district provides 3D printers as part of their engineering program, another provides multiple 3D printers in all schools for a variety of school projects, a third provides full access of 3D printers for their senior project, and a fourth district provides summer camp specifically on the use of 3D printers related to their curriculum. 3D printers have become a regular tool in school programs and curriculum.
- 6. Given the already heightened concerns for student safety in schools today, MASS and its members are alarmed by the prospect of online posting of technical data which would allow children and others who should not have access to weapons to print plastic guns that could do harm in our schools.
- 7. This would be a direct threat to school safety and add additional burdens to schools in their free and open use of technology in school programs and activities.

8. It would also threaten the psychological well-being of Massachusetts students, who have increased anxiety about the possibility of school shootings due to the highly publicized school shooting events in recent years. I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information, and belief. Executed on this 7th day of August, 2018 at Lexington, Massachusetts. 

1 The Honorable Robert S. Lasnik 2 3 4 5 6 7 UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON 8 AT SEATTLE 9 STATE OF WASHINGTON, et al. NO. 2:18-cv-01115-RSL 10 Plaintiffs, **DECLARATION OF** 11 FREDERICK P. RIVARA, MD, MPH IN SUPPORT OF PLAINTIFFS' v. 12 MOTION FOR PRELIMINARY UNITED STATES DEPARTMENT OF INJUNCTION 13 STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE 14 CONTROLS; MIKE MILLER, in his official Hearing Date: August 21, 2018 capacity as Acting Deputy Assistant Secretary 15 of Defense Trade Controls; and SARAH HEIDEMA, in her official capacity as Director 16 of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND 17 AMENDMENT FOUNDATION, INC.; and 18 **CONN WILLIAMSON** 19 Defendants. 20 I, Frederick P. Rivara, MD, MPH declare as follows: 21 1. I am over the age of 18 and have personal knowledge of all the facts stated herein. 22 I am the Vice Chair and Professor of Pediatrics and Adjunct Professor of 2. 23 Epidemiology at the University of Washington. I am an elected member of the National 24

DECLARATION OF FREDERICK P. RIVARA, MD, MPH 2:18-cv-01115-RSL ATTORNEY GENERAL OF WASHINGTON 800 Fifth Avenue. Suite 2000 Seattle, WA 98104-3188 (206) 464-7744 Academy of Medicine (formerly the Institute of Medicine) and has conducted research on injury prevention for 40 years and on firearm injuries for 30 years. I have been recognized for my accomplishments by the Centers for Disease Control and Prevention, the American Public Health Association, the American Academy of Pediatrics, the Academic Pediatric Association and the University of Washington. I am a founding director of the Harborview Injury Prevention and Research Center and have served as its director for more than a decade. A true and correct copy of my Curriculum Vitae is attached hereto as Exhibit A.

- 3. My research on firearm injuries included seminal studies published in the *New England Journal of Medicine* showing the association of home ownership of guns and risk of violent death in the home, comparison of homicide and suicide in Seattle and Vancouver, BC (similar cities with very different firearm laws), the effect of safe storage on firearm deaths among children and adolescents, and injury and criminal recidivism of patients admitted with gunshot injuries.
- 4. I am generally regarded as one of the leading experts in the world on prevention of injuries to children.
- 5. Guns manufactured by private individuals with 3-D printers pose many risks, especially to children and youth.
- 6. **Mistaking a 3-D printed gun for a toy gun**. The photos of 3-D printed guns reflect that these devices resemble toy guns. Studies conducted with school-aged children show that they easily find hidden guns while playing, and those who do find them pull the trigger, while aiming it at co-playmates. Jackman et al<sup>1</sup> studied 8-12 year old boys in a lab situation and

<sup>&</sup>lt;sup>1</sup> Jackman GA, Farah MM, Kellermann AL, Simon H. Seeing is believing: what do boys do when they find a gun? Pediatrics; 2001; 1247-50.

showed that 72% of boys found a hidden gun, 76% handled it and 48% pulled the trigger. Dillon and Bushman<sup>2</sup> Similarly studied 104 8-12 year olds and showed 83% found the hidden gun and 42% handled it. Approximately 80-100 children die each year from accidental shootings.<sup>3</sup> The most common circumstance for these deaths, accounting for half, was playing with a gun. A gun was mistaken for a toy in 16% of younger children's deaths.

- 7. **School shootings:** The United States has been plagued by school shootings over the last 19 years since the 13 youth killed in Columbine in 1999. More than 187,000 students attending at least 193 elementary or secondary schools have been exposed to a shooting on campus during school hours. In the majority of middle and high school shooting incidents, the shooter was a student at the school.<sup>4</sup> By federal law, individuals under the age of 21 are prohibited from purchasing a handgun. With the availability of 3-D printers in many high schools, there is a significant risk that a student will manufacture his or her own handgun using this technology. Moreover, in the wake of the spate of school shootings in the nation, some schools are installing metal detectors. These guns would be able to escape such detection.
- 8. Children as the other victim of intimate partner violence (IPV). Every year, more than 1800 persons, 85% of whom are women, are killed by their intimate partners; half of these murders involve guns. State laws that prohibit a person subject to IPV-related restraining orders from possessing firearms. Concomitantly, states that require persons subject to IPV-related restraining orders to relinquish firearms in their possession have a 10% lower intimate

21 Dillon KP, Bushman B. Effects of exposure to gun violence in movies on children's interest in real guns.

22 JAMA Pediatrics 2017; 171: 1057-62.

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<sup>&</sup>lt;sup>3</sup> Fowler KA, Dahlberg LL, Haileyesus T, Guttierrez C, Bacon S. *Childhood firearm injuries in the US*. Pediatrics 2017; 140 (1).

<sup>&</sup>lt;sup>4</sup> FBI. A study of active shooter incidents in the US between 2000 and 2013. Department of Justice, September 2013.

partner homicide rate than states without those laws.<sup>5</sup> Based on this data, it is reasonable to 1 2 predict that the ability of abusers to bypass such laws by manufacturing their own guns on 3-D 3 printers will lead to an increase in intimate partner homicides. Two-thirds of female victims of 4 IPV have children in the home, who represent the other victim of IPV. It is likewise reasonable 5 to predict that these children will suffer an increase in injuries and death from the widespread 6 availability of 3D-printed guns. I declare under penalty of perjury under the laws of the State of Washington and the United 7 8 States of America that the foregoing is true and correct. 9 DATED this 6 day of August, 2018, at Seattle, Washington. 10 11 Enederup Rivara no 12 Frederick P. Rivara, MD, MPH 13 14 15 16 17 18 19 20 21 22 23 <sup>5</sup> Diez C, Kurland R, Rothman E, et al. State intimate partner violence-related firearm laws and intimate partner homicide rates in the US, 1991 to 2015. Annals Intern Med 2017; 167: 536-543.

DECLARATION OF FREDERICK P. RIVARA, MD, MPH 2:18-cv-01115-RSL ATTORNEY GENERAL OF WASHINGTON 800 Fifth Avenue. Suite 2000 Seattle, WA 98104-3188 (206) 464-7744

# Exhibit 1

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#### **CURRICULUM VITAE**

#### Frederick P. Rivara, M.D., M.P.H.

Date of Birth: May 17, 1949

Place of Birth: Far Rockaway, New York

Current Professor of Pediatrics,

Appointments: University of Washington, School of Medicine

Adjunct Professor, Epidemiology, University of Washington, School of

Public Health

Vice Chair for Academic Affairs, Department of Pediatrics, University of

Washington, School of Medicine

Seattle Children's Guild Endowed Chair in Pediatric Research

Contact Harborview Injury Prevention and Research Center information: Box 359960, 325 Ninth Ave, Seattle, WA 98104

(206) 744-9449, fax (206) 744-9962, email: fpr@uw.edu

EDUCATION:

1962 - 1966 Archbishop Molloy High School

Jamaica, New York

1966 - 1970 College of the Holy Cross

Worcester, Massachusetts

1970 - 1974 University of Pennsylvania

Philadelphia, Pennsylvania

1978 - 1980 University of Washington

Seattle, Washington

<u>DEGREES</u> OBTAINED:

1970 B.A., Summa Cum Laude, College of the Holy Cross

1974 M.D., University of Pennsylvania

1980 M.P.H., University of Washington

**PROFESSIONAL** 

TRAINING:

1974 - 1976 Intern and Junior Assist. Resident, Pediatrics, Children's Hospital

Medical Center, Boston, MA

1978 - 1980 Senior Assistant Resident in Pediatrics and Senior Fellow, Univ. of

Washington, Seattle, Washington

1978 - 1980 Fellowship, Robert Wood Johnson Clinical Scholar, University of

Washington, Seattle, Washington

Visiting Scholar, Institute of Criminology, Cambridge University,

1993 Cambridge, United Kingdom

Frederick P. Rivara, M.D., M.P.H. 2		
1994	Visiting Faculty, University of Malaysia, Kuala Lumpur, Malaysia	
<u>ACADEMIC</u> <u>APPOINTMENTS</u> :		
1978 - 1980	Acting Instructor, Department of Pediatrics, University of Washin	gton
1981 - 1984	Assistant Professor, Department of Pediatrics and Community	
4004	Medicine, University of Tennessee Center for the Health Scien	
1984	Associate Professor of Pediatrics, University of Tennessee Cent the Health Sciences	erior
1984 - 1989	Associate Professor of Pediatrics,	
	Adjunct Associate Professor of Epidemiology, University of Washington	
1989 -	Professor of Pediatrics,	
	Adjunct Professor of Epidemiology, Univ. of Washington	
PROFESSIONAL		
<u>POSITIONS</u> : 1976 – 1978	Medical Director, Outreach Services,	
1070 1070	Family Health Services, Hazard, Kentucky	
1976 - 1978	National Health Service Corps, Family Health Services, Hazard, Kentucky	
1981 - 1984	Director, Resident Continuity Clinic Program, Dept. of Pediatrics	
	University of Tennessee	•
1983 - 1984	Medical Director, Southern Poison Center	
1981 - 1984	Associate Director, Ambulatory Care, LeBonheur Children's Medical Center	
1981 - 1984	Pediatric Coordinator, Robert Wood Johnson Rural Infant Care F	Project
1987 - 2000	Director, Harborview Injury Prevention & Res. Ctr	
1990 – 1991	President of Medical Staff, Harborview Med. Center	
2001 - 2002		
1994 - 2015	Head, Division of General Pediatrics, University of Washington	
1997-	Vice Chair for Academic Affairs, Department of Pediatrics, Unive Washington	rsity of
2000-2017	Editor, Archives of Pediatrics & Adolescent Medicine/ JAMA Ped	liatrics
2017-	Editor, JAMA Network Open	

# HONORS AND AWARDS:

Marie Leebron Prize in Pediatrics, University of Pennsylvania, 1974

United States Public Health Service Award for Outstanding Service, 1978

3

Ambulatory Pediatric Association, Excellence in Teaching and Research Award, 1984

Highline Council PTSA Community Service Award, 1988

Award of Excellence for Injury Prevention, Johns Hopkins University, 1991

George Adkins Endowed Professorship, 1991

Ambulatory Pediatric Association, Research Award, 1992

National SafeKids Research Award, 1992

American Academy of Pediatrics, Section on Injury and Poison Prevention, Physician Achievement Award, 1994

American Public Health Association, Injury Control and Emergency Health Services Section Distinguished Career Award, 1995

Charles C. Shepard Science Award, Centers for Disease Control and Prevention, 1998

Stanley Stamm Award for Best Role Model for Pediatric Housestaff, 1999

Honorary Fellow, Royal College of Paediatrics and Child Health 2004-

Elected Member, Institute of Medicine 2005-

University of Washington School of Public Health Distinguished Alumnus Award, 2009

Miller-Sarkin Mentoring Award, Academic Pediatric Association April 2012

University of Washington Minority Faculty Mentoring Award, 2015

Injury Free Coalition Prevention Pioneer Award, 2015

Pediatric Trauma Society Lifetime Achievement Award, 2016

<u>CERTIFICATION</u>: American Board of Pediatrics, 1981

Frederick P. Rivara, M.D., M.P.H.

4

#### PROFESSIONAL ORGANIZATIONS:

Alpha Omega Alpha (AOA), Elected to membership, 1973; President, Beta Chapter University of Pennsylvania 1973-1974

Ambulatory Pediatric Association Board of Directors 1987-89

American Academy of Pediatrics (Fellow, 1981)

International Society for Child and Adolescent Injury Prevention (Founding Member, 1993, and Founding President, 1993-1999)

Society for Pediatric Research

American Association for the Surgery of Trauma (Contributing Scientist, 1997-)

American Pediatric Society, 2001-

Institute of Medicine, 2005-

Society for the Advancement of Injury Research Member of the Board 2009-2012 President Elect, 2012 President 2013-2014

### NATIONAL COMMITTEES AND CONSULTANTSHIPS:

Epidemiology Task Force, DSHS, State of Washington, 1987-1988

National Committee for Injury Prevention and Control, 1987-1989

Residency Training Committee, Department of Pediatrics, University of Washington, 1987-2000

Committee on Accident & Poison Prevention, American Academy of Pediatrics, 1987-1989

## Frederick P. Rivara, M.D., M.P.H.

5

National Consortium on Violence Research, 1996-2000

Chair, Injuries Working Group, National Children's Study. 2001-2004

Scientific Advisory Board (Chair), Hospital for Sick Kids Research Institute, 2006-2012

Committee on Adolescent Health Care Services and Models of Care, Institute of Medicine 2006-2008

Board of Children, Youth and Families, National Research Council and Institute of Medicine, 2007—2010

Committee on Oral Health Access to Care (Chair), Institute of Medicine, 2009-2011

Scientific Advisory Board, The Urban Child Institute, Memphis, TN 2008-2015

Committee on Sports Related Concussions in Youth, Institute of Medicine (Vice Chair) 2012-2013

Nomination Committee, American Pediatric Society 2012

NICHD special study section for T32 applications 2013

Prevention of Bullying Workshop, Chair, Institute of Medicine April 2014

NICHD Advisory Council 2015-2018

Committee on the Biological and Psychosocial Effects of Peer Victimization: Lessons for Bullying Prevention, Institute of Medicine, Chair 2015-2016

### **EDITORIAL RESPONSIBILITIES**:

Editorial Board, Pediatrics in Review, 1987-1990

Associate Editor, *Injury Prevention*, 1995-1999

Deputy Editor, Injury Prevention, 1999-2010

Associate Section Editor (Injury Epidemiology and Prevention), *Journal of Trauma*, 1996

Editorial Board, Journal of Surgical Outcomes, 1998

Editorial Board, AAP Grand Rounds, 1998-2001

Editorial Board, *Journal of the Ambulatory Pediatric Association*, 1998-2002

Guest Editor, Special Issue of American Journal of Preventive Medicine on Systematic Reviews of Motor Vehicle Injury Prevention Programs, 1999

Guest Editor, Special Issue of American Journal of Preventive Medicine on Systematic Reviews of Occupational Injury Prevention Strategies, February, 2000

Issue Editorial Advisor, Unintentional Injuries in Children, Future of Children Spring/Summer, 2000

Editor in chief, Archives of Pediatrics & Adolescent Medicine/ JAMA Pediatrics, 2001-17

Editorial Board, JAMA 2001-

Editor in chief, JAMA Network Open, 2017-

## **PUBLICATIONS**:

- 1. **Rivara FP**. Outreach in urban clinics: A descriptive study. *J Community Health* 1980; 6:43-53.
- 2. **Rivara FP**. Impact of the Rural Health Clinics Services Bill: A projection. *J Community Health* 1980; 6:103-112.
- 3. **Rivara FP**. Irritable bowel syndrome presenting in the first week of life. *J Fam Pract* 1980; 10:731-732.
- 4. Berger LR, **Rivara FP**. Mini-bikes: A case study in under-regulation. *Business and Society Review* 1980; 41-43.
- 5. Williams H, **Rivara FP**, Rothenberg MB. The child is dying: Who helps the family? *Am J Maternal Child Nursing* 1981; 6:261-265.
- 6. **Rivara FP**. Epidemiology of childhood injuries, pp. 13-18; Minibikes: A case study in underregulation, pp. 61-64. In: Bergman AB (ed.) *Preventing Childhood Injuries*. *Report of the Twelfth Ross Roundtable on Critical Approaches to Common Pediatric Problems*. Columbus, Ohio: Ross Laboratories, January, 1982.
- 7. **Rivara FP**. Teenage pregnancy: The forgotten father. *J Dev Behav Pediatr* 1981; 2:142-145.
- 8. **Rivara FP**. Injury prevention: The pediatrician as child advocate. *J Dev Behav Pediatr* 1981; 2:160-162.
- 9. **Rivara FP**, Stapleton FB. Handguns and children: A dangerous mix. *J Dev Behav Pediatr* 1982; 3:35-38.
- 10. **Rivara FP**, Berger LR. Consumer product hazards: Setting priorities for research and regulatory action. *Am J Public Health* 1980; 70:701-704.
- 11. **Rivara FP**. Epidemiology of childhood injuries. I. Review of current research and presentation of conceptual framework. *Am J Dis Child* 1982; 136:399-405.
- 12. **Rivara FP**, Bergman AB, LoGerfo JP, Weiss NS. Epidemiology of childhood injuries. II. Sex differences in injury rates. *Am J Dis Child* 1982; 136:502-506.
- 13. **Rivara FP**, Culley GA, Steptoe MM. The Hazard Infant Care Project: Problems of innovation and continuity. *J Ambulatory Care Manage* 1983; 6:44-57.
- 14. **Rivara FP**. Childhood injuries. III: Epidemiology of non-motor vehicle head trauma. *Dev Med Child Neurol* 1984; 26:81-87.
- 15. **Rivara FP**, Wasserman AL. Teaching psychosocial issues to pediatric house officers. *J Med Educ* 1984; 59:45-53.
- 16. Muram D, **Rivara FP**, Buxton BH. Management of sexual abuse in prepubertal girls. *Pediatr Adolesc Gynecol* 1984; 2:191-196.
- 17. **Rivara FP**. Traumatic deaths of children in the United States: Currently available prevention strategies. *Pediatrics* 1985; 75:456-462.

- 18. **Rivara FP**. Physical abuse in children under two: A study of therapeutic outcomes. *Child Abuse Neglect* 1985; 9:81-87.
- 19. **Rivara FP**, Sweeney PJ, Henderson BF. A study of low socioeconomic status, black teenage fathers and their nonfather peers. *Pediatrics* 1985; 75:648-656.
- 20. Berger LR, Kalishman S, **Rivara, FP**. Injuries from fireworks. *Pediatrics* 1985; 75:877-882.
- 21. Sullivan JL, Woda BA, Herrod HG, Koh G, **Rivara FP**, Mulder C. Epstein-Barr virus-associated hemophagocytic syndrome: Virological and immunopathological studies. *Blood* 1985; 65:1097-1104.
- 22. **Rivara FP**, Culley GA, Hickok D, Williams RL. A health program's effect on neonatal mortality in eastern Kentucky. *Am J Prev Med* 1985; 1:35-40.
- 23. **Rivara FP**, Barber M. Demographic analysis of childhood pedestrian injuries. *Pediatrics* 1985; 76:375-381.
- 24. **Rivara FP**. Fatal and nonfatal farm injuries to children and adolescents in the United States. *Pediatrics* 1985; 76:567-573.
- 25. **Rivara FP**. Epidemiology of violent deaths to children and adolescents. *Pediatrician* 1985; 12:3-10.
- 26. Baddour LM, Land MA, Barrett FF, **Rivara FP**, Bruce WM, Burns AL. Hepatobiliary abnormalities associated with postanginal sepsis. *Diagn Microbiol Infect Dis* 1986; 4:19-28.
- 27. **Rivara FP**, Wall HP, Worley P, James KD. Pediatric nurse triage. Its efficacy, safety, and implications for care. *Am J Dis Child* 1986; 140:205-210.
- 28. **Rivara FP**. Parental rights and obligations of the unwed adolescent father. *Am J Dis Child* 1986; 140:531-534.
- 29. **Rivara FP**, Sweeney PJ, Henderson BF. Black teenage fathers: What happens when the child is born? *Pediatrics* 1986; 78:151-158.
- 30. **Rivara FP**, Parish RA, Mueller BA. Extremity injuries in children: Predictive value of clinical findings. *Pediatrics* 1986; 78:803-807.
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- 32. Parish RA, Watson M, **Rivara FP**. Why obtain arterial blood gases, chest x-rays, and clotting studies in injured children? Experience in a regional trauma center. *Pediatr Emerg Care* 1986; 2:218-221.
- 33. **Rivara FP**, Mueller BA. The epidemiology and prevention of pediatric head injuries. *J Head Trauma Rehabil* 1986;1:7-15.
- 34. **Rivara FP**, Sweeney PJ, Henderson BF. Risk of fatherhood among black teenage males. *Am J Public Health* 1987; 77:203-205.
- 35. Mueller BA, **Rivara FP**, Bergman, AB. Factors associated with pedestrian-vehicle collision injuries and fatalities. *West J Med* 1987; 146:243-245.

- 36. Shugerman R, **Rivara FP**, Parish R, Heimbach D. Contact burns of the hand. *Pediatrics* 1987; 80:18-21.
- 37. **Rivara FP**, Mueller BA. The epidemiology and causes of childhood injuries. *J Social Issues* 1987; 43:13-31.
- 38. **Rivara FP**, Kamitsuka MD, Quan L. Injuries to children younger than 1 year of age. *Pediatrics* 1988; 81:93-97.
- 39. Mueller BA, **Rivara FP**, Bergman AB. Urban-rural location and the risk of dying in a pedestrian-vehicle collision. *J Trauma* 1988; 28:91-94.
- 40. **Rivara FP**, Dicker BG, Bergman AB, Dacey R, Herman C. The public cost of motorcycle trauma. *JAMA* 1988; 260:221-223.
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- 42. Sloan JH, Kellermann AL, Reay DT, Ferris JA, Koepsell T, **Rivara FP**, Rice C, Gray L, LoGerfo J. Handgun regulations, crime, assaults, and homicide. *N Engl J Med* 1988; 319:1256-1262.
- 43. **Rivara FP**, Maier RV, Mueller BA, Luna GA, Dicker BG, Herman C, Kenagy JW, Copass MK, Carrico CJ. Evaluation of potentially preventable deaths among pedestrian and bicyclist fatalities. *JAMA* 1989; 261:566-570.
- 44. Stout JW, **Rivara FP**. Schools and sex education: Does it work? *Pediatrics* 1989; 83:375-379.
- 45. **Rivara FP**, Mueller BA, Fligner CL, Luna G, Raisys VA, Copass M, Reay DT. Drug use in trauma victims. *J Trauma* 1989; 29:462-470.
- 46. Thompson RS, **Rivara FP**, Thompson DC. A case control study of the effectiveness of bicycle safety helmets. *N Engl J Med* 1989; 320:1361-1367.
- 47. **Rivara FP**, Reay DT, Bergman AB, Analysis of fatal pedestrian injuries in King County, WA, and prospects for prevention. *Public Health Rep* 1989; 104:293-297.
- 48. **Rivara FP**, Calonge N, Thompson RS. Population-based study of unintentional injury incidence and impact during childhood. *Am J Public Health* 1989; 79:990-994.
- 49. Kalbfleisch J, **Rivara FP**. Principles in injury control: Lessons to be learned from child safety seats. *Pediatr Emerg Care* 1989; 5:131-134.
- 50. Kaufmann CR, **Rivara FP**, Maier RV. Pediatric trauma: Need for surgical management. *J Trauma* 1989; 29:1120-1126.
- 51. **Rivara FP**, Wolf ME. Injury research: Where should we go from here? *Pediatrics* 1989; 84:180-181.
- 52. DiGuiseppi CG, **Rivara FP**, Koepsell TD. Attitudes toward bicycle helmet ownership and use by school-age children. *Am J Dis Child* 1990; 144:83-86.
- 53. DiGuiseppi CG, **Rivara FP**, Koepsell TD, Pollisar L. Bicycle helmet use by children. Evaluation of a community-wide helmet campaign. *JAMA* 1989; 262:2256-2261.

- 54. Sloan JH, **Rivara FP**, Reay DT, Ferris JA, Kellermann AL. Firearm regulations and rates of suicide. A comparison of two metropolitan areas. *N Engl J Med* 1990; 322(6):369-73.
- 55. **Rivara FP**, Bergman AB, Drake C. Parental attitudes and practices toward children as pedestrians. *Pediatrics* 1989; 84:1017-1021.
- 56. Kellermann AL, **Rivara FP**, Banton J, Reay D, Fligner C. Validating survey responses to questions about gun ownership among owners of registered handguns. *Am J Epidemiol* 1990; 131(6) 1080-1084.
- 57. Bergman AB, **Rivara FP**, Richard DD, Rogers LW. The Seattle children's bicycle helmet campaign. *Am J Dis Child* 1990; 144:727-731.
- 58. Kaufmann CR, Maier RV, **Rivara FP**, Carrico CJ. Evaluation of the pediatric trauma score. *JAMA* 1990; 263:69-72.
- 59. **Rivara FP**, Bergman AB. Injuries. A preventable problem for children. *University of Washington Medicine* 1989; 15(I):8-9.
- 60. **Rivara FP**. Child pedestrian injuries in the United States. Current status of the problem, potential interventions, and future research needs. *Am J Dis Child* 1990; 144:692-696.
- 61. Mueller BA, **Rivara FP**, Lii S-M, Weiss NS. Environmental factors and the risk for childhood pedestrian-motor vehicle collision occurrence. *Am J Epidemiol* 1990; 132:550-560.
- 62. Thompson DC, Thompson RS and **Rivara FP**. Incidence of bicycle-related injuries in a defined population. *Am J Public Health* 1990; 80:1388-1390.
- 63. Esposito TJ, Maier RV, **Rivara FP**, Carrico CJ. A statewide profile of general surgery trauma practice. *J Trauma* 1991; 31:39-42.
- 64. Anderson PA, **Rivara FP**, Maier RV, Drake C. The epidemiology of seatbelt-associated injuries. *J Trauma* 1991; 31:60-67.
- 65. Bobo JK, Thapa P, Gale JL, Vaughan TL, Gilchrist LD, **Rivara FP**. Response bias associated with asking former study participants to assist in new research. *Psychol Rep* 1991; 68:355-359.
- 66. Esposito TJ, Maier RV, **Rivara FP**, Carrico CJ. Why surgeons prefer not to care for trauma patients. *Arch Surg* 1991; 126:292-297.
- 67. Kaufmann CR, Maier RV, Kaufmann EJ, **Rivara FP**, Carrico CJ. Validity of applying adult TRISS analysis to injured children. *J Trauma* 1991; 31:691-698.
- 68. Anderson PA, Henley MB, **Rivara FP**, Maier RV. Flexion distraction and chance injuries to the thoracolumbar spine. *J Orthop Trauma* 1991; 5:153-160.
- 69. Bergman AB, **Rivara FP**. Sweden's experience in reducing childhood injuries. *Pediatrics* 1991; 88:69-74.
- 70. Thompson DC, Thompson RS, **Rivara FP**, Wolf ME. A case-control study of the effectiveness of bicycle helmets in preventing facial injury. *Am J Public Health* 1990; 80:1471-1474.

- 71. Burdorick TE, Anderson PA, **Rivara FP**, Cohen W. Flexion-distraction fracture of the cervical spine. A case report. *J Bone Joint Surg* 1991; 73-A:1097-1100.
- 72. Erdmann TC, Feldman KW, **Rivara FP**, Heimbach DM, Wall HA. Tap water burn prevention: The effect of legislation. *Pediatrics* 1991; 88:572-577.
- 73. **Rivara FP**, Booth CL, Bergman AB, Rogers LW, Weiss J. Prevention of pedestrian injuries to children: Effectiveness of a school training program. *Pediatrics* 1991; 88: 770-775.
- 74. **Rivara FP**, Thompson RS, Thompson DC, Calonge N. Injuries to children and adolescents: Impact on physical health. *Pediatrics* 1991; 88:783-788.
- 75. Michaud LJ, **Rivara FP**, Longstreth WT Jr, Grady MS. Elevated initial blood glucose levels and poor outcome following severe brain injuries in children. *J Trauma* 1991; 31:1356-1362.
- 76. Rogers LW, Bergman AB, **Rivara FP**. Promoting bicycle helmets to children: A campaign that worked. *J Musculoskel Med* 1991; 8:64-77.
- 77. **Rivara FP**, DiGuiseppi C, Thompson RS, Calonge N. Risk of injury to children less than five years of age in day care versus home care settings. *Pediatrics* 1989; 84:1011-1016.
- 78. **Rivara FP**, Tanaguchi D, Parish R, Stimac GK, Mueller B. Poor prediction of positive computed tomographic scans by clinical criteria in symptomatic pediatric head trauma. *Pediatrics* 1987; 80:579-584.
- 79. Wasserman AL, Whitington, **Rivara FP**. Psychogenic basis for abdominal pain in children and adolescents. *J Am Acad Child Adolesc Psychiatry* 1988; 27:179-184.
- 80. **Rivara FP**, Morgan P, Bergman AB, Maier RV. Cost estimates for statewide reporting of injuries by E coding hospital discharge abstract data base systems. *Public Health Rep* 1990; 105:635-638.
- 81. **Rivara FP**, Kemper KJ. Health supervision for the high-risk preschooler. *Pediatrics in Review* 1990; 12:181-186.
- 82. Offner PJ, Jurkovich GJ, Gurney J, **Rivara FP**. Revision of TRISS for intubated patients. *J Trauma* 1992; 32:32-35.
- 83. Ballard JE, Koepsell TD, **Rivara FP**. Association of smoking and alcohol drinking with residential fire injuries. *Am J Epidemiol* 1992; 135:26-34.
- 84. Dunne RG, Asher KN, **Rivara FP**. Behavior and parental expectations of child pedestrians. *Pediatrics* 1992; 89:486-490.
- 85. Heyer NJ, Franklin G, **Rivara FP**, Parker P, Haug JA. Occupational Injuries among minors doing farm work in Washington. *Am J Public Health* 1992; 82:557-560.
- 86. Wolf ME, **Rivara FP**. Nonfall injuries in older adults. *Annu Rev Public Health* 1992; 13:509-528.
- 87. Grossman DC, **Rivara FP**. Injury control in childhood. *Pediatr Clin North Am* 1992; 39:471-485.

- 88. Offner PJ, **Rivara FP**, Maier RV. The impact of motorcycle helmet use. *J Trauma* 1992; 32:636-642.
- 89. Jurkovich GJ, **Rivara FP**, Gurney JG, Seguin D, Fligner CL, Copass M. Effects of alcohol intoxication on the initial assessment of trauma patients. *Ann Emerg Med* 1992; 21:704-708.
- 90. Callahan CM, **Rivara FP**. Urban high school youth and handguns. A school-based survey. *JAMA* 1992; 267:3038-3042.
- 91. Alexander BH, **Rivara FP**, Wolf ME. The cost and frequency of hospitalization for fall-related injuries in older adults. *Am J Public Health* 1992; 82:1020-1023.
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**Rivara FP**, Fan MD. Pediatricians, Firearms, and the First Amendment. JAMA Pediatr. 2017 Jun 5. doi: 10.1001/jamapediatrics.2017.1145. [Epub ahead of print] PubMed PMID: 28586831.

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Rowhani-Rahbar A, **Rivara FP**. Firearm Injury After Gun Shows: Evidence to Gauge the Potential Impact of Regulatory Interventions. Ann Intern Med. 2017 Oct 24

Bauchner H, **Rivara FP**, Bonow RO, Bressler NM, Disis MLN, Heckers S, Josephson SA, Kibbe MR, Piccirillo JF, Redberg RF, Rhee JS, Robinson JK. Death by Gun Violence-A Public Health Crisis. JAMA. 2017 Oct 9.

**Rivara FP**, Easley TJ, Flanagin A, Bauchner H. Announcing JAMA Network Open-A New Journal From The JAMA Network. JAMA. 2017 Oct 3;318(13):1230-1232

## NATIONAL AND INTERNATIONAL INVITATIONAL LECTURES AND VISITING PROFESSORSHIPS

Annual meeting keynote speaker, Child Accident and Prevention Trust, London, UK, October 27, 1993

The role of medicine in Violence Prevention. Hastings Center, New York, New York, 1994

Community based approaches to Injury Prevention. Crippled Children's Foundation Forum on Child Health, invited faculty, University of Tennessee, Memphis, TN, October 12-13, 1995

Bicycle helmets and prevention of head injuries. Department of Pediatrics, New York University, New York, New York.

Guns and risk of Violent Death. Department of Pediatrics, SUNY at Buffalo, New York

Community Approaches to Injury Control. Pediatric Grand Rounds, Children's Hospital and Medical Center, Cincinnati, OH, July 2, 1996.

Community Approaches to Injury Control. Pediatric Grand Rounds, Children's Hospital of Philadelphia

Community Approaches to Injury Control. Pediatric Grand Rounds, Hospital for Sick Children, Dept. of Surgery, Toronto, Canada.

Science and injury control. State of the Art Plenary Session, Society for Pediatric Research, Washington, D.C., May 3, 1997

Alcohol and the risk of injury. 4th Burlington Northern Visiting Lectureship in Trauma. The University of Texas Southwestern Medical Center at Dallas, Dallas, TX, February 25, 1998.

Role of the pediatrician in violence prevention. Visiting Professor, Grand Rounds. University of Arkansas, Arkansas Children's Hospital, Little Rock, AR, April 6-7, 1998.

Keynote address at the 1998 Charles C. Shepard Science Award, "Injury Control – the Uses of Science for Prevention." Centers for Disease Control and Prevention, Atlanta, GA, May 7, 1998.

Role of the pediatrician in violence prevention. Silverman Lectureship, State University of New York, Department of Pediatrics, Syracuse, NY, November 4, 1998.

Child occupant protection. Keynote speaker, Lifesavers Conference, Seattle, Washington, March 22, 1999.

Community approaches to injury control. The Pele Chandler Lectureship, Pediatric Grand Rounds, Baylor College of Medicine, Houston, TX, May 21, 1999.

The Inaugural Lydia Catherine McCutcheon Lecture on Childhood Injury Prevention, "Motor vehicle crashes. Causes and prevention of injury," Surgical Services Grand Rounds, Hospital for Sick Children, Toronto, Ontario, Canada, January 11, 2001.

Using science to change public policy. Visiting Professor, Department of Pediatrics, University of Michigan, Ann Arbor Michigan. September 2001.

Keynote Speaker, SafeUSA Conference Atlanta, GA. December 3, 2001

(1) Using science to change public policy. (2) Mentoring junior faculty. Pfizer Visiting Professor, Boston Medical Center, March 2002

Mentoring fellows and junior faculty. Leader, Session at 2003 Pediatric Academic Societies meeting, May 2002

Prevention of Injuries to Children and Adolescents Plenary Session, 6<sup>th</sup> World Conference of Injury Prevention and Control, Montreal, Canada, May 12-15, 2002

Using science to change public policy. Visiting Professor, Grand Rounds, University of Tennessee, Memphis, TN, June 18-19, 2002

Using science to change public policy. Keynote speaker, Robert Wood Johnson Generalist Faculty Scholar Annual Meeting, Ponte Vedra, FL December 3, 2002.

Mentoring fellows and junior faculty. Leader, Session at 2003 Pediatric Academic Societies meeting, Seattle, WA, May 2003

"Breakfast with the Professor", 2003 Pediatric Academic Societies meeting, Seattle, WA, May 2003

Role of the pediatrician in violence prevention. Annual Alan Ross Lecturer, McGill University Health Centre, Montreal, Quebec, Canada; September 17, 2003

Featured presenter at the 2003 Annual Meeting of the American Public Health Association's Injury Control and Emergency Health Services section special session, San Francisco, CA November 17, 2003

Pediatric determinants of adult disease. Visiting Professor, Department of Pediatrics, Yale University. 2004

Mentoring fellows and junior faculty. Leader, Session at 2004 Pediatric Academic Societies meeting, May 2004

The Second Annual Rud Polhill lecture, Department of Pediatrics, University of Alabama Birmingham, April 13, 2005.

Methodologic considerations for Injury Research. Ambulatory Pediatric Association Injury Control Special Interest Group. Pediatric Academic Societies' Annual Meeting. Washington, DC. May 16, 2005

The 1 million lives campaign. Ambulatory Pediatric Association Injury Control Special Interest Group. Pediatric Academic Societies' Annual Meeting. Washington, DC. May 2006

Interventions during childhood to prevent later violence and homicide. Annual Meeting of the American Society of Criminology, Los Angeles, November 2006.

Intimate partner violence and its effects on children. Annual Cornfeld lecture. Children's Hospital of Philadelphia, January 31, 2007

The scientific basis of injury research. Invited to deliver the Grant Gall lecture. University of Calgary and Alberta Children's Hospital, Calgary, Canada. February 7, 2007.

Intimate partner violence. 19<sup>th</sup> Annual WAMI Trauma Conference, Seattle June 3, 2008.

On becoming a physician: Idealism and Science. Keynote Speaker at the University of Tennessee College of Medicine White Coat Ceremony, August 15, 2008.

Global Health and Childhood Injury. Keynote address to the Section on Injury, Violence and Poison Prevention, AAP National Meeting, Boston, October 13, 2008.

Non-randomized designs. Workshop at the Pediatric Academic Societies Meeting, Baltimore May 5, 2009.

Ethical issues in manuscript preparation. Workshop at the Pediatric Academic Societies Meeting, Baltimore May 2, 2009.

35<sup>th</sup> William T. Fitts, Jr. Oration, Annual Meeting of the American Association for the Surgery of Trauma, Pittsburgh October 2, 2009.

Keynote Speaker, Owen Wells Symposium, Maine Medical Center, November 13, 2009

Global injury control. The William T. Fitts, Jr., MD Annual Lectureship in Trauma, Annual meeting of the American Association for the Surgery of Trauma, September 2009.

Plenary Speaker, "Moving forward in controlling injuries to children" Safety 2010 World Conference, London, UK September 22, 2010.

Frederick P. Rivara, M.D., M.P.H.

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Improving Access to Oral Health Care, Physician and Dentist: Together managing early childhood health, Seattle July 28, 2011

California Report Dissemination Workshop, San Francisco, August 4, 2011 Improving oral health care for children.

Preventing injuries to children around the world. Excellence in Pediatrics Annual Meeting, Istanbul November 2011.

Role of pediatricians in controlling and preventing injuries. 35<sup>th</sup> Al's Run Visiting Professor, Children's Hospital of Milwaukee, September 2012.

Impact of intimate partner violence on children, Excellence in Pediatrics Annual Meeting, Madrid, November 2012.

Writing your first paper. PAS/APPD Core curriculum fellows; series. PAS annual meeting, San Diego, April 24, 2015

Adventures in Journal Editing. PAS Annual meeting, San Diego, April 26, 2015

Novel insights into pediatric trauma. PAS Topic Symposium, San Diego April 27, 2015

Sports concussions in Youth. The 2015 Harry Medovy Lecture, Children's Hospital, Winnipeg, University of Manitoba. 2015

Keynote speaker. 42<sup>nd</sup> Annual Rocky Mountain Trauma & Emergency Medicine conference. Jun 2015.

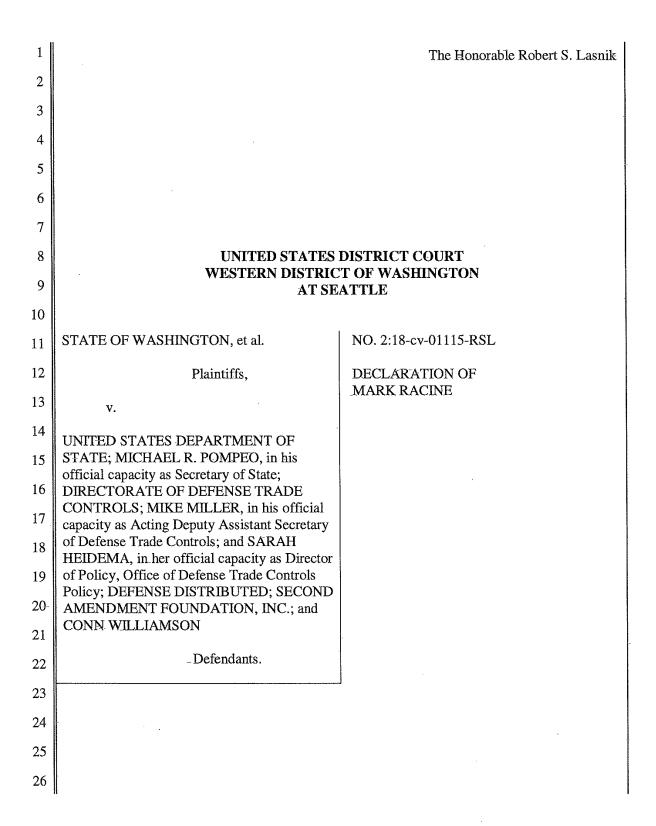
Prevention of injuries to children and Adolescents: Where we have been, where we Need to go. Injury Free Coalition annual meeting, Fort Lauderdale Nov 14, 2015.

Keynote speaker, 3<sup>rd</sup> annual meeting of the Pediatric Trauma Society, Nashville TN 2016

Keynote Speaker. 2017 Templeton Pediatric Trauma Symposium. Pittsburgh, PA March 3, 2017. Lessons from 30 years of Pediatrics Injury Control and Advocacy

Keynote Speaker, Society for Pediatric Epidemiologic Research Annual Meeting June 20, 2017

Prevention of firearm injuries. Grand Rounds, Texas Children's Hospital, June 2017.



DECLARATION OF MARK RACINE

I, Mark Racine, declare as follows:

- 1. I am the Chief Information Officer ("CIO") for the Boston Public Schools ("BPS"), a school system serving more than 56,000 students in 125 schools from prekindergarten through grade 12.
- 2. As the CIO, I am responsible for BPS' technology equipment, hardware, software, systems and related services.
- 3. Three dimensional ("3D") printers are available to students in many BPS schools, and students are learning, as part of the curriculum, to operate these technologies.
- 4. The declining price of 3D printers, coupled with the inclusion in our Computer Science pathways, has increased the accessibility of 3D printers in many of our schools. We currently support over 100 3D printers in BPS with over 50 teachers trained on the use of 3D printers this last spring.
- 5. Moreover, 3D printers are becoming more prevalent and available outside of school, as more advanced and affordable models come to the market.
- 6. Many of our teachers and students are acquiring 3D printers on their own as the cost continues to drop, with some models already on the market for under \$100. We feel strongly that our students must be prepared to learn and work with technology such as 3D

printers, but the availability of downloadable plans for firearms sends the wrong message about the role of this technology to our students. 7. The safety of our students, both in and out of school, is the highest priority for the Boston Public Schools and we strongly discourage the distribution of electronic blueprints for the construction of firearms. I declare under penalty of perjury that the foregoing is true and correct. Executed on this 3th day of August, 2018 at Boston, Massachusetts MARK RACINE 

DECLARATION OF MARK RACINE

1		The Honorable Robert S. Lasnik
2		
3		
4		
5		
6		
7		DISTRICT COURT T OF WASHINGTON
8		ATTLE
9	STATE OF WASHINGTON, et al.	NO. 2:18-cv-01115-RSL
10	Plaintiffs,	DECLARATION OF
11	v.	GAREN WINTEMUTE
12	UNITED STATES DEPARTMENT OF	
13	STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State;	
14	DIRECTORATE OF DEFENSE TRADE CONTROLS; MIKE MILLER, in his official	
15	capacity as Acting Deputy Assistant Secretary of Defense Trade Controls; and SARAH	
	HEIDEMA, in her official capacity as Director of Policy, Office of Defense Trade Controls	-
	Policy; DEFENSE DISTRIBUTED; SECOND AMENDMENT FOUNDATION, INC.; and	
18	CONN WILLIAMSON	
20	Defendants.	
21	I, Garen Wintemute, hereby declare as fo	llows:
22	1. I received my B.S. from Yale Ur	niversity in 1973; my M.D. from the UC Davis
23	·	M.P.H. from the Johns Hopkins University
24	Bloomberg School of Public Hea	

DECLARATION OF GAREN WINTEMUTE

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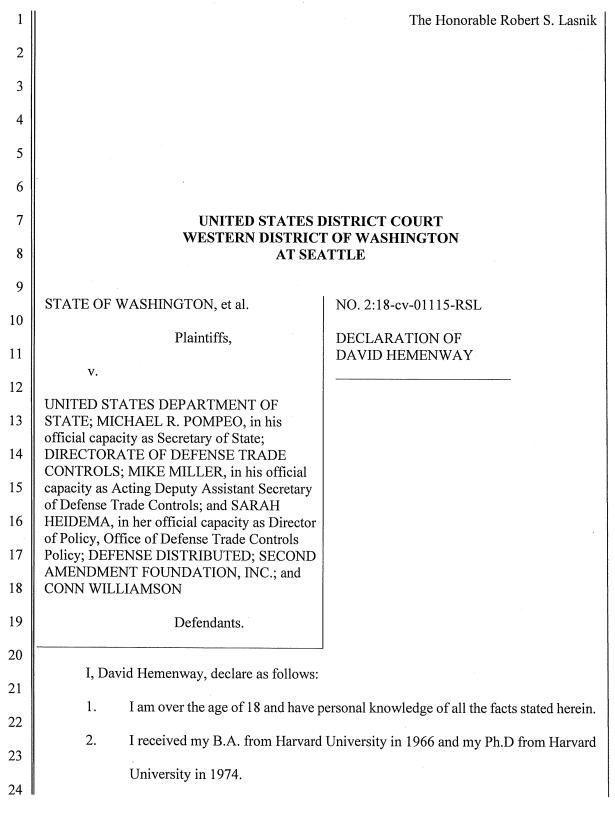
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- 2. I am presently the Director of the Violence Prevention Research Program at UC Davis School of Medicine, which is a research center dedicated to (1) conducting research and developing sound scientific evidence on the nature, causes, consequences, and prevention of firearm violence; (2) promoting the adoption of evidence-based firearm violence prevention measures; and (3) increasing education and training in firearm violence research and its applications
- I am also Director of the University of California Firearm Violence Research
  Center, the nation's first publicly funded center for research and policy
  development on firearm violence.
- 4. I have published extensive findings on gun accessibility, the relationship between gun ownership and violence, and other related topics.
- I have also testified before Congress and served as a consultant for the National Institute of Justice; the Bureau of Alcohol, Tobacco and Firearms (on matters related to the criminal use of firearms); and the Centers for Disease Control and Prevention.
- 6. Today is not the first time that the United States has encountered the threat of plastic firearms.
- In the 1980s, gun manufacturers sought to produce firearms made almost entirely out of plastic.
- 8. In 1988, I published an article in the official journal of the American Academy of Pediatrics explaining how plastic firearms are particularly dangerous for children who mistake them for toys. The firearms proposed for production at

1 that time would also have been undetectable by security screening devices at 2 airports and other public places. 3 9. Later that year, Congress passed the Undetectable Firearms Act, a federal law 4 that prohibits the manufacture and sale of these dangerous weapons. 10. 5 Thankfully, as a result of this and other similar laws, undetectable, plastic 6 firearms that resemble toys have not caused serious public health problems over 7 the past thirty years. 8 11. But the danger is now back – and this time it is even greater than before. 9 12. Because modern-day plastic firearms may be made by virtually anyone with 10 access to a 3D printer, these deadly weapons will likely have greater public 11 health consequences than anything we could have imagined back in 1988. 13. 12 The number of unintentional shooting deaths of children will likely increase as 13 many children may believe the weapons are toys. 14 14. The inability of plastic firearms to be detected by metal detectors will likely 15 lead to these weapons being taken into schools, prisons, courthouses, and other 16 places of public accommodation. 17 15. Because they will not have serial numbers or other identifying information, they 18 will not be traceable for criminal justice purposes and for that reason will be 19 particularly suitable for criminal use. With current firearms, as studies by the 20 Bureau of Alcohol, Tobacco and Firearms have shown, criminal users often go 21 to great lengths to obliterate serial numbers. 22 23 24

1	16. Finally – and perhaps most importantly – plastic firearms will almost certainly
2	be used by people who pose a danger to themselves or others – including people
3	with mental illness or a history of violence.
4	17. For all these reasons, there is no doubt that plastic firearms pose a grave threat
5	to public health and safety.
6	
7	I declare under penalty of perjury under the laws of the United States of America that the
8	foregoing is true and correct.
9	and the state of t
10	DATED this 3 day of August, 2018, at
11	hot.
12	GAREN WINTEMUTE
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DECLARATION OF GAREN WINTEMUTE



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DECLARATION OF DAVID HEMENWAY

1	3.	I am Professor of Health Policy at the Harvard (T.H. Chan) School of Public
2		Health and Director of the Harvard Injury Control Research Center. Since
3		1990, faculty of the Center have written over 150 journal articles on firearm
4		issues.
5	4.	I am personally the first-author of over 80 journal articles, including articles on
6		the topics of firearms, violence, and suicide.
7	5.	I am also the sole author of five books, including Private Guns Public Health
8		(2006, 2017), which summarizes the literature on the relationship between guns
9		and injuries, and describes the public health approach to reducing firearms
10		violence.
11	6.	In 2012, I was recognized by the Centers for Disease Control & Prevention as
12		one of the "twenty most influential injury and violence professionals over the
13		past twenty years."
14	7.	My research on firearms has covered many areas, including firearms regulation,
15		the relationship between firearms and suicide, the relationship between firearms
16		and violence, and how firearms affect a community's feelings of safety.
17	8.	As a public health leader, I can tell you that the overarching goal of public
18		health is prevention.
19	9.	The goal of public health policy is to make it easy for people to stay healthy,
20		and difficult to get sick or injured.
21	10.	Instead of waiting for terrible things to happen, and only then responding, the
22		goal is to prevent bad things from happening in the first place.
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DECLARATION OF DAVID HEMENWAY

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1	11.	Reducing access to firearms by irresponsible persons is a major part of making
2		that goal a reality.
3	12.	It is well recognized that firearms are inherently dangerous weapons that may
4		be used to inflict serious injury and death.
5	13.	The evidence shows that strong gun laws are associated with lower-rates of
6		violent death across the United States.
7	14.	Decades of firearms research demonstrates that firearms in the home not only
8		increase the risk of unintentional firearm injury but also increase the risk of
9		homicide and suicide—because of the increased risk of firearm homicide and
10		firearm suicide.
11	15.	Plastic firearms pose a serious threat to public health and safety.
12	16.	In the 1980s, gun manufacturers figured out a way to make firearms that were
13		made with more plastic and less metal.
14	17.	The public health community advocated against these weapons, and Congress
15	·	responded by passing a federal law that made it illegal to sell them.
16	18.	As a result, plastic firearms have not been produced commercially, distributed
17		widely, or caused serious public health problems.
18	19.	But print-at-home plastic firearms threaten to change all of that.
19	20.	Plastic firearms are more likely to be taken for toys by young children, which
20		may lead to an increase in unintentional child fatalities and injuries.
21	21.	They may escape detection by metal detectors and therefore may be taken into
22		sensitive places like schools, courtrooms, and sporting-event venues.
23	22.	And they are untraceable by law enforcement because they lack a serial number.
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DECLARATION OF DAVID HEMENWAY

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1	23.	Plastic firearms may be used by people who pose a danger to themselves or
2		others, including people with a history of violence or who are suicidal and
3		suffering from mental illness – people who might otherwise be prevented from
4		owning a gun had they applied for a license or submitted to a background
5		check.
6	24.	In short, there is no question that plastic firearms pose a serious threat to public
7		health and that we should not be making it easier for people to produce or
8		obtain them.
9	25.	We must not wait to act until many people die or are injured, and public fear has
10		increased from the inappropriate use of these dangerous weapons.
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14	I declare	under penalty of perjury under the laws of the United States of America that the
15		rue and correct.
16	DATE	ED this 3 <sup>rd</sup> day of August, 2018, at Boston, Massachusetts.
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18		DAVID HEMENWAY
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DECLARATION OF DAVID HEMENWAY

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1 The Honorable Robert S. Lasnik 2 3 4 5 6 7 UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON 8 AT SEATTLE 9 STATE OF WASHINGTON, et al. NO. 2:18-cv-01115-RSL 10 Plaintiffs, **DECLARATION OF** 11 REPRESENTATIVE ELIOT L. ENGEL IN SUPPORT OF PLAINTIFFS' v. 12 MOTION FOR PRELIMINARY UNITED STATES DEPARTMENT OF INJUNCTION 13 STATE; MICHAEL R. POMPEO, in his official capacity as Secretary of State; DIRECTORATE OF DEFENSE TRADE 14 CONTROLS; MIKE MILLER, in his official Hearing Date: August 21, 2018 capacity as Acting Deputy Assistant Secretary 15 of Defense Trade Controls; and SARAH HEIDEMA, in her official capacity as Director 16 of Policy, Office of Defense Trade Controls Policy; DEFENSE DISTRIBUTED; SECOND 17 AMENDMENT FOUNDATION, INC.; and 18 **CONN WILLIAMSON** 19 Defendants. 20 I, Eliot L. Engel, declare as follows: 21 1. I am over the age of 18 and have personal knowledge of all the facts stated herein. 22 I am the Ranking Member of the United States House of Representatives 2. 23 Committee on Foreign Affairs (the "Committee"). I write to provide the Court certain facts and 24

DECLARATION OF REPRESENTATIVE ELIOT L. ENGEL 2:18-cv-01115-RSL ATTORNEY GENERAL OF WASHINGTON 800 Fifth Avenue. Suite 2000 Seattle, WA 98104-3188 (206) 464-7744 information about my Committee's grave concerns regarding the U.S. Department of State's (the "Department") temporary modification of the International Traffic in Arms Regulation (ITAR) in order to approve public release to permit Defense Distributed and its associates to publish on the Internet computer code for the printing of 3D firearms. The Department apparently took these actions to fulfill a Settlement Agreement between the Department and Defense Distributed, a "private defense firm" operated by a self-described "crypto-anarchist," and an associated organization and individual.

- 3. My Committee did not learn of the Department's decision to make the ITAR modification directly from the Department. Instead, on or about July 19, 2018, a representative of a non-profit organization notified a Committee staff member of the State Department's Settlement Agreement, and the decision to make the ITAR modification.
- 4. The failure of the Department to notify the Committee of the removal from the United States Munitions List (USML) of the computer code at issue in the case before the Court violated a federal statute. 22 U.S.C. § 2278(f) prohibits the Department from removing any item from the USML without providing 30 days' prior notice to the House Committee on Foreign Affairs and the Senate Committee on Foreign Relations. The Department failed to provide the Committee the notice required by 22 U.S.C. § 2278(f) before the modification removing the computer blueprints for printing 3D guns from the USML.
- 5. Immediately after learning of the Settlement Agreement and the decision to make the modification, Committee staff demanded to meet with Department officials. At this meeting, which occurred on July 24th, Committee staff expressed deep concerns about the Settlement Agreement and the modification, questioned the State Department officials about how the

Appendix

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Appendix

Settlement Agreement came about, and stated that the Department's actions violated the statutory notice requirement in 22 U.S.C. § 2278(f).

- 6. Based on the information I have received from Committee staff, I have concluded that the Department of State was advised by attorneys at the U.S. Department of Justice to implement the Settlement Agreement despite significant concerns that some officials of the Department of State had, and continue to have, that the authorization to Defense Distributed provided by the Settlement Agreement creates a risk to national security. These concerns stem from the threats arising from widespread dissemination to the public worldwide of computer code allowing the printing of guns, including non-metallic guns, on 3D printers.
- 7. On July 20, 2018, I wrote the Secretary of State expressing my disapproval of the Department's actions and its failure to consult with Congress as required by § 2278(f). A true and correct copy of this letter is attached as Exhibit 1. I expressed to the Secretary of State that the removal of the computer code for 3D printing of firearms from the USML defeats U.S. laws that require background checks and, because of the undetectability of plastic guns, makes it virtually impossible to protect the public from terrorists, lone wolf killers, or mentally unstable individuals. I also advised that the State Department had misused its authority in "temporarily" modifying the ITAR because there can be nothing temporary about posting the blueprints for 3D printing of weapons on the internet.
- 9. The removal of items from the USML, and the concomitant notice to the Committee required by 22 U.S.C. § 2278(f), are rare.
- 10. Further, the notice required by 22 U.S.C. § 2278(f) is far from an administrative formality, but instead has an important function for Congress. Congress pays close attention to

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1	the notices and the nature of the items proposed to be removed from the USML. These notices
2	enable Congress to exercise its constitutional oversight authority and ensure national security.
3	11. In reality, the Department typically accords the Committee more deference in the
4	review process than even 22 U.S.C. § 2278(f) provides. It is common when the Department
5	proposes to remove items from the USML for the Department to give significantly longer than
6	30 days' notice to the Committee. The Department works intensively with Congress during this
7	period. It meets regularly with staff, explains what it is seeking to remove from the list and why,
8	and details the reasons the removal will not endanger national security or U.S. interests. There
9	is an active back-and-forth between the Department and Congress during this process.
10	12. Congress does not simply rubber stamp removals from the USML. In this case,
11	the Department's actions not only violated the statutory notice requirement but diverged from
12	established practice when items are proposed for removal from the USML.
13	I declare under penalty of perjury under the laws of the United States of America that the
14	foregoing is true and correct.
15	DATED this 7 day of August, 2018, at Waskingto, 7.
16	DATED this 7 day of August, 2018, at Waskington, VC.  Eliol L. Engel
17	Representative Eliot L. Engel
18	Member, United States House of Representatives
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# Exhibit 1

EDWARD R. ROYCE, CALIFORNIA CHAIRMAN

AMY PORTER CHIEF OF STAFF THOMAS SHEEHY STAFF DIRECTOR



ELIOT L. ENGEL, New YORK RANKING DEMOCRATIC MEMBER JASON STEINBALIM

DEMOCRATIC STAFF DIRECTOR

One Hundred Fifteenth Congress U.S. House of Representatives Committee on Foreign Affairs

2170 Rayburn House Office Building Washington, DC 20515 www.foreignaffairs.house.gov

July 20, 2018

The Honorable Mike Pompeo Department of State 2201 C Street, NW Washington, DC 20520

Dear Mr. Secretary:

I write to register my profound concern about an action by Department of State officials to remove from export controls certain software for 3-D printing of firearms. This is exceptionally dangerous because it will promote global availability of such technical information and consequent unrestricted manufacture of firearms. This action was taken in settling a lawsuit: Defense Distributed v. United States.

There are several disturbing aspects of the Department's action. Foremost is the likelihood that weapons will become available to anyone with a laptop and a 3-D printer. This defeats US laws which require background checks on the sale of weaponry. The danger is magnified because 3-D printed fireams would be made of plastic and, therefore, undetectable by most security systems. With these stealthy weapons in the hands of terrorists, lone wolf killers, or mentally unstable individuals, it will become virtually impossible to protect anyone from gun violence.

Moreover, the text of the settlement, attached, suggests that the Department's officials are mis-using authority under Section 126.2 of the International Traffic in Arms Regulations to "temporarily" remove this technical information from the United States Munitions List (USML). However, as anyone who has ever posted something on the internet knows, once posted, the item is instantly and permanently available to all who seek it. Therefore, it is impossible to temporarily publish 3-D gun printing software on the internet. Inasmuch as Sec. 126.2 authority is reserved for use only in the interests of U.S. security and foreign policy, it stretches credulity to believe that release of this information is in the U.S. interest.

The Honorable Mike Pompeo Department of State 2201 C Street, NW Washington, DC 20520

Use of this temporary ITAR authority also suggests that Department officials sought a way to avoid complying with Section 38(f) of the Arms Export Control Act, which requires advance notification to Congress for any removal from the USML.

The settlement of this lawsuit is slated to go into effect by July 27<sup>th</sup>. I urge you to suspend the Department's implementation of the settlement immediately and prevent the inappropriate and dangerous release of this technical information.

Sincerely,

ELIOT L. ENGEL

Ranking Member